SUC-SESSION

YOUR MAGAZIN FOR THE SINCLAIR SPECTRUM

Sir Clive Sinclair
* 30.7.1940 †16.9.2021

- Obituary of Sir Clive Sinclair
- News
- Penguin PS2 Interface
- Psion VU-3D
- Next Emulator #Cspect
- Games and Demos
- And much more ...

ISSUE
230.
OF YOUR
MAGAZINE

EDITORIAL

Hello, dear SUC readers!

2021 is coming to its end, and everything has remained as it was before. The Corona virus still annoys us, Thomas Eberle still refuses to pay a round - nothing new, then. As for the Corona virus: this is the last time it will be mentioned in this issue. Promise! No stupid jokes, no lamenting, nothing!

In the second half of this year Sir Clive left. Unfortunately, he was not the only one to leave us. John Wilson and Bernie Drummond have also left us. That is sad but true. Our old heroes are stepping down. The wheel of time keeps turning, there is nothing we can do about it.

But let's turn to more pleasant topics.

We are always happy to receive letters from our readers, including follow-up questions. However, we can only provide limited support; some things we know, some things we pass on to the other readers. But sorry, we are no support center and we cannot deliver translations or building instructions on request. But of course we can write here in the magazine that there is interest in certain topics, but then it must be addressed by the members who know about it. If you want to exchange information more quickly, you are very welcome to the only known German Spectrum forum on http://spc.tlienhard.com. Here the whole German Spectrum competence is represented, the members are helpful, courteous and there is always an answer. Anyway, please write us plenty of letters to the editor, we like to get feedback from you, and we need it to make this magazine better.

And here are the very last news for the 40th birthday of the ZX Spectrum:

For the 40th birthday of our ZX-Spectrum there will be an event again, this time in Great Britain near Birmingham. The whole event will be organized by the proven team of Spectrum35, Lee Fogarty (World of Spectrum) and Thomas Eberle (Spectrum User Club). This time we need a stadium, the event will take place at Bescot Stadium (FC Walsall). Birmingham is very close and there is also an international airport with cheap flights. We recommend interested guests to look for flights and accommodation already, so that it will not be too tight. More info and tickets will be available on https://spectrumevents.website, many speakers from Spectrum's past and future already have confirmed their attendance. Check out the website, it's already online.

I would like to apologize to the English readers for the lateness. In fact, I simply had too many other things to do to find time to finish this issue at least in early January. Of course, I hope that this will not continue, but I fear that little will change, at least for the next issue. This year 2022 has started the way 2021 ended - with a lot of work.

And now Thomas and I hope you enjoy reading the New SUC Session. If you liked the issue, write us. If not, write us too.

Kind regards,

Joachim & Thomas, January 22nd, 2022

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IMPRINT

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Editor SUC-Session 230:
Joachim Geupel & Thomas Eberle

Editor SCENE+: Thomas Eberle

Club manager:
Mirko Seidel, Birkenweg 8
89197 Weidenstetten
email: mirko.seidel1@gmail.com

This issue has been supported by:

Joachim Geupel	Joa.Geu@gmx.de
Thomas Eberle	thomas.eberle@sintech-shop.de
Ellvis	
Harald Lack	
Frank Dopierala	
Christof Odenthal	
Bernhard Lutz	
Dieter Hucke	

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Wednesday, February 26th 2022

READERS LETTERS

Unfortunately, we received very little feedback from our readership. This is especially unfortunate because we tried a lot of new things in the last issue, with two articles and a listing for the NEXT, as well as the Adventure Corner. We would like to get some feedback on the new features, i.e. how you liked them.

You can do that easily, just send an email to thomas.eberle@sintech-shop.de.

But now to those who have written:

Larry Livingston has several questions:

I need a new keyboard membrane for a Sinclair ZX Spectrum 128+ 2A computer.

Can you please help me?

And one more question: I recently purchased a "ZX-VGA-JOY" card from you and am blown away by the picture quality. Connected this together with a DIVIDE card via µSlot and found that the Kempston joystick then unfortunately no longer works. Is this a known problem? Is there a remedy?

I would be very pleased about a message from you.

Hello Larry,

there is not enough demand for the +2 keyboard membranes, as they are generally of good quality (unlike the 48k / 128k membranes). Often cleaning the membrane is all that is needed to repair it.

As for the Kempston port, both of your two interfaces have one Kempston port and twice Kempston just doesn't work, so one has to be turned off. Which one you switch off, I must leave to you, please proceed according to the respective manual. In the ZX-VGA manual this is described, with the DivIDE I don't know which one you have.

Leif Mortensen from Denmark has written to us again:

Hi Thomas, thanks for your reply. Here is a late reply from me as well. I probably won't be very active until I have my NEXT, probably in September. We are about 30 freaks here, gathered on the internet and I have good contacts with Lars Jespersen, the man behind the Softrom modules, and he will probably provide news for the NEXT as well. I will write more when we are all ready. Thanks for now for the positive response, we will keep in touch.

Kind regards, Leif Mortensen

Hello Leif,

nice to hear from Denmark again. I know the magazine "Sinclair Freakeren", even if I can only rudimentarily read many words. I don't know Danish, but some things are not dissimilar to German. An exchange can certainly bring a lot, the role of Lars Jespersen in the Softrom modules is as unknown to me as the NEXT is in large parts now. Unfortunately, the NEXT has still not been delivered and at the moment no new delivery date is known. But we hope that the "Freakeren" can start soon.

Once again Lothar Ebelshäuser from Kall-Scheuen had written again in the long period between the issues.

Hello Joachim & Thomas,

the info was really great as always. I had already commented on the last disk. I insert this one at least once a week with enthusiasm. As far as the SPECTRUM NEXT is concerned, I am still a beginner. In Info 229 there is a listing on page 43; there the following commands appear: %, REPEAT and LAYER. I can't find anyone of these commands on my keyboard. Who can help?

Also, I would appreciate if the software would appear on SD cards, as on the disk.(FOR GOD'S SAKE DO NOT STOP TO PROVIDE THE DISK !!!)

I hope I could contribute something to the info, Many greetings from the Eifel, Lothar

Hello Lothar,

first of all many thanks for your feedback, it is the first we have received on a NEXT topic. Already with the 128k in comparison to the 48k the difference in the BASIC was introduced, that one had now no more KEYWORDS (thus one key = a word), but the BASIC commands must be typed in individually. This was continued with the NEXT. In the last issue there was a listing for the NEXT, accordingly the "NEXT BASIC" must be selected in the main menu. There, as said, the letters of each command are entered individually. The KEYWORDS that are written at he NEXT keyboard are meant only to work furthermore conveniant in the 48k mode. For the use as 128k or NEXT the printed keywords are not necessary, not useable.

We also had the idea to let the SCENE+ appear on SD card. But this failed so far because of the higher costs, a SD card costs at least 5 Euro and has 32GB... we need mostly not even 1 MB. Nevertheless, it may please the readers, so we put the proposal here to vote and ask for many messages: The SCENE+ is published only 1 x per year. Should we offer the TAP file on SD card in addition to MB02, Opus, +D and TAP format by e-mail? The subscription would then cost about 4 Euros more than a subscription on diskette, so a subscription of three paper magazines and one SD card would cost 26 Euros. Alternatively three PDF magazines and one SD card would cost 9 Euro. What is your opinion?

Gladly to thomas.eberle@sintech-shop.de

We haven't heard from Frank Dopierala from Bottrop for a long time, who sent us two articles in addition to the letter to the editor:

Hello dear SUC session team!

I would like to give you a big praise for the past issue 229! I practically devoured the issue (which is always a pity, of course, when you're through in no time ;)). I especially liked the articles "THE QUITE CONFUSING QL", as well as "ZX SPECTRUM ULA-TYPES" - both HIGHLY interesting topics and articles!!! Especially the addition at the ULA article about the replacement types and alternatives was extremely enlightening, as now the 40th (unbelievable, isn't it?) birthday of our beloved Speccy is approaching and surely some parts quit working bit by bit. It's just very encouraging to see that passionate Speccy fans, who are also highly specialized engineers, develop and offer such gold pieces of current

hardware. I am very much looking forward to the new issue 230 and hope for, even after almost 40 years, more interesting and enriching articles!

Many greetings and further good luck
Frank

Thank you Frank, also for the articles that I think will be used in this issue (this has to be decided by Joachim, as it is already close to the editorial deadline). Of course we hope to be able to continue to offer articles on hardware. I (Thomas) am less of a specialist for hardware, but fortunately there is also Joachim and hopefully many more readers who can contribute to this topic. I know from the Spectrum meetings that we have many hobbyists with hardware-projects, but unfortunately there is not so much to read in this magazine. It would be nice if this would change.

Harald Lack from Raubling is one of our longest supporters and regularly sends us adventure solutions. He also wanted to get in touch again:

Hello Thomas,
unfortunately my PC broke down and so I had this delay in answering. I think our newspaper is great and very diversified. Everyone should be able to find something interesting in it. My thanks to all of you for the great work. I will try to support you as good as possible with articles.
KEEP UP THE GOOD WORK!!!!!!!!!
kind regards, Harald

Thanks Harald, fortunately we still had supplies of articles from you and the SUC session is not published monthly. Otherwise we would have needed more articles. Nevertheless also to you a "keep up the good work"!

Frank Ruthe from Wittingen took the opportunity for a feedback:

Hello everyone!
I'll go straight to your specific questions from SUC 229:
ZX Spectrum Next topics: Yes, please! After all, I'm surely not the only one among us who has the NEXT at home, the more info the better. Not being a Facebook user, I sometimes have a hard time following what's going on there. Of course, I also have far too little time for the NEXT - especially since I now have to spread my retro computer hobby between about four platforms (with the same time allotment). But every article, hint, introduction concerning NEXT-specific topics helps me to set priorities...:-)
Adventure corner: For me personally, playing text (+graphic) adventures (already in the 80s) is rather nothing for me - but I'm not the benchmark. I would be more interested in writing one. Adventuron or (more ZX-Spectrum-specific) DAAD I find exciting. Maybe you could make that a topic?
*And anyway: I have already made some small own attempts with the z88dk - but a "tutorial" for the ZX Spectrum/+128k/Next for the development in C (+ inline assembler) would be great (**). Why did I choose this enumeration? Because "standard" 48k "we-program-a-Centipede-clone" has been regurgitated over and over again (for both Z80 assembler and C). Stuff like "We'll save and organize files in the 128k RAM disk" or "How to talk properly to a ZX Interface 1/Opus Discovery/..." or "We'll build a *.mdr file reading routine for NextZXOS/esxDOS" would be much cooler!*
Of course it's clear to me that you need time and desire for this - and we probably all have too little of it (at least time is always short). But wishing costs nothing for the time being. :-)
See you, Frank

*P.S.: ** - of course I know the multi-part ZX81 course on the z88dk by Jens and Bodo. But in the meantime it fits only conditionally to the current incarnations of the z88dk and is in part too much tailored to the 81 or sometimes also too "generic".*

Hi Frank, thanks for your feedback. Personally, I have to admit that I haven't dealt with the NEXT in detail yet, but nevertheless I have already discovered something that I will put into an article. We won't have many NEXT specialists here, so we'll have to compile all our findings and make them available to everyone. The same goes for your wishes for adventure creation software or a programming course. So far I have only dealt with Quill in the past and I have just started with "C". Your tip with the course of Jens and Bodo I take up gladly, here I still learn myself. But if any of our readers has some experience in this topic, feel free to contact me, I'm sure we can make something out of it. I will help gladly with the production of articles.

From the neighboring country Czech Republic came very interesting info from Jan Peterka from Pilsen:

Hello Thomas,
the way that the SUC-Session magazine is doing, fits perfectly for me. Therefore "yes", please more articles regarding ZX Spectrum NEXT. I also like the adventure corner, especially if it will be about new adventures for the NEXT. But also Czech and Slovak adventures are being translated and will be available soon, as far as I know.
There is a book in english language about games (including adventures) from former Czechoslovakia. As part of the presentation on the web, some of the games have also been translated into English. Some are just re-presented for the web and so not playable on the Spectrum, but some will run on an online ZX Spectrum emulator. Here is the link to the book presentation: http://ironcurtain.svelch.com/.
Have a good time :)
Best regards, Jan (Speccy.cz)

Hello Jan,
this is exactly the info we need. We are an international club and hope that our readers from all over the world will send us just latest info, like this. Thanks for the link to a very interesting website.

NEWS IN SHORT

WHEN IS THE NEXT COMING?

The next production of the SPECTRUM NEXT is in preparation, but the problems are manifold. At least one is informed about the situation fairly regularly, the last mail is from October 31, 2021. According to this, the keyboards are already finished, the cases are as good as manufactured. The mainboard, however, has been reworked and is now at version 2E. Unfortunately, not all changes worked right away, for example, the HDMI output initially delivered an unusable picture in the test. According to the information, the problems have been solved and the board is now in production.

NEW SPECTRUM MOVIE

»The rubber-keyed wonder« is a movie for the anniversary "40 years of ZX Spectrum" and should be released next year. The project is financed via crowdfunding and for now only the backers can get a copy. The makers have already launched several projects, including meaningful titles like "The Amiga years", "From Bedroom to Billions" or "The Playstation Revolution". The project is considered safe, there were almost twice as many backers as would have been necessary. By the time you read this, the funding will be complete, but you can still watch a nice video introducing the project:

https://www.kickstarter.com/projects/1195082866/the-rubber-keyed-wonder-40-years-of-the-zx-spectrum

BERNIE DRUMMOND PASSED AWAY

Unfortunately, the series of legends that sadly leave us does not stop. The artist who was co-responsible for Spectrum classics like *»Batman«, »Head over Heels«* or *»Match Day 2«,* among others, passed away unexpectedly in November 2021. Rest in peace.

SPECTRUM GOTO 40

The ZX Spectrum will be 40 years old next year. and there will be a birthday party. This time we need a stadium. As with Spectrum35, the team around Lee Fogarty (World of Spectrum) and Thomas Eberle (Spectrum-User-Club) has already organized the party. It will take place in the stadium of Walsall (near Birmingham/Great Britain) on April 30, 2022.

So far as pre-info, so you can book flights and accommodation, more details will follow.

SIR CLIVE HAS GONE! AN OBITUARY

BY JOACHIM GEUPEL

In 2020 we congratulated him on his 80th birthday and wished him many more healthy years. Now, after a long illness, Sir Clive Sinclair died of cancer in London on September 16th at the age of 81.

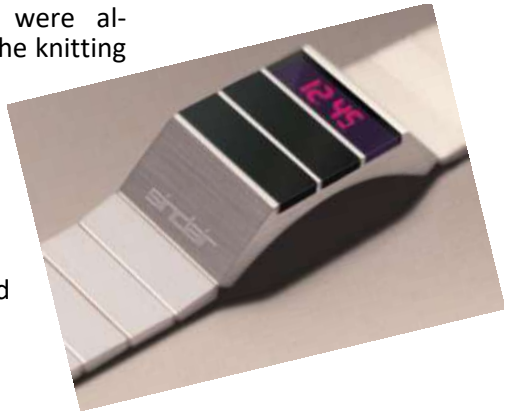
We know him mainly because of the computers ***ZX80***, ***ZX81*** and last but not least because of our ***ZX SPECTRUM'S,*** which accompanied many of us our whole life, some with interruption. The life of Sir Clive was eventful, exciting and would be worth to be filmed, which is partly already in progress. The film Micro Men of the BBC tells the competition of Acorn and Sinclair and can be found on YouTube.

https://www.youtube.com/watch?v=XXBxV6zamM

THE FIRST YEARS

Clive Marles Sinclair was born on July 30, 1940 near Richmond in London. His parents were George William Carter Sinclair and Thora Edith Ella Marles. His brother Iain Sinclair, who made his name as a writer and filmmaker, saw the light of day in Cardiv in 1943. His sister Fiona, of whom nothing else is known, was born in 1947.

His father and grandfather were already engineers. At a young age, he developed a calculating machine powered by punched cards and believed that he was the inventor of punched card programming. Unfortunately, he was almost 100 years too late, because systems operated with punched cards were already in use in the knitting industry in the 18th century.



Even before he graduated from high school in 1958, he built radios and repaired

amplifiers, at that time certainly still devices with tubes, since the transistor was only ready for the market ten years earlier and tube devices dominated the market. Furthermore, between 1959 and 1962, he published a total of 13 books for amateur electronics engineers. One of them, *Practical Stereo Handbook: The complete guide to stereo*, written in June 1959, was reprinted seven times until 1973.

To call Sir Clive merely an innovative entrepreneur would be to fall far short. He was an inventor and tinkerer, a restless spirit who was concerned with the future and designed and produced equipment that was ahead of its time by virtue of its conception. Most of his devices often suffered, however, from the technology of the time. They required techniques and innovations that either did not exist at the time or had not yet reached the level of development that was actually required. The devices that were delivered had frustrating limitations or suffered from technology that was simply not yet mature and available.

Clive Sinclair's goal was to make electronics affordable for everyone. To keep costs down, he cut corners wherever possible. One example is the first Spectrum computers. Memory chips were expensive and hard to get at the time. To upgrade the Spectrum to 48 kB, Sir Clive came up with the idea to buy cheap defect memory chips, where only one bank was working, from the manufacturers. He bought those 64kB memory chips, had them tested and, depending on which bank worked, put them into the ZX Spectrum computers. The selection of the respective memory bank was realized in the computer by two wire bridges, which most of us should be familiar with.

SINCLAIR RADIONICS

In 1961 he founded his first company, Sinclair Radionics. With it he produced and sold hi-fi equipment until 1974. In 1972, he launched the first Executive pocket calculator, which was significantly smaller and more powerful than the competitors and could perform the four basic arithmetic operations, including squaring and reciprocals. There are still users whose school and university years were accompanied by this calculator and who have nostalgic memories of it. Until 1977, Sinclair Radionics built a total of eight calculator versions and pocket calculators that really deserve their place in the history of calculators.

On Planet Sinclair

https://rk.nvg.ntnu.no/sinclair/calculators/calculators.htm,

the pocket and desk calculators can be found.

Miniaturization runs like a thread through his product range. In 1963, he developed the *Slimline*, a radio no bigger than a matchbox. Until the *Z1 Micro AM* Radio in 1999, his radios became smaller and smaller. The *Z1 Micro AM* is the size of a hearing aid and is worn in the ear like one.

Over the years, he and his collaborators developed a wide variety of devices. The Black Watch, one of the world's first digital wristwatches was one of them. In fact, however, the division of measuring devices was the most important one at Sinclair Radionics. The six multimeters released by Sinclair Radionics, the frequency counter, and the C110 mini-oscilloscope were real big sellers, without those devices computers probably would not have existed. The profits generated by the measuring instruments gave him the opportunity to take an interest in other areas and invest money. Clive Sinclair was not really interested in the gauges. As he remarked to Computing magazine in February 17, 1983, the »instruments were profitable but boring.«

Thandar SC110, ursprünglich Sinclair C110

Sir Clive, at that time not yet ennobled by the Queen, left Sinclair Radionics in 1979 after the company had incurred losses for several years. The departure was reasonably profitable for him. The "golden handshake" with which he was seen off earned him £10000. Already in the same year, the measuring instrument division was spun off and moved to Sinclair Electronics. In 1980 the end of Sinclair Radionics was sealed. Thandar Electronics took over Sinclair Electronics and Sinclair Radionics ceased to exist.

SINCLAIR RESEARCH LTD.

At some point during that time, Clive Sinclair had founded the *Science of Cambridge* company. This company made a profit of £131000 on a turnover of £640000 and could be said to be quite profitable. In March of the same year the company changed its

name to Sinclair Computer Ltd. and already one year later to the *Sinclair Research Ltd.* known to us.

Its first computer, the *MK14*, which was sold as a kit, came on the market in 1978. It was sold 15000 times for 39,95£. The *ZX80* appeared in 1980, selling 100000 units in 18 months. The improved *ZX81*, which appeared on the market in 1981, sold more than 1.5 million units. The *ZX Spectrum*, which appeared in 1982 and cost about £99 new, sold over 5 million units worldwide.

The *Sinclair QL* was the last computer built by *Sinclair Research Ltd.* to appear. It missed the right time for its release by only a few weeks. The computer had again a trend-setting concept. Its basic was enormously powerful and it had multitasking before most other computers. Unfortunately, the concept missed the market due to the less user-friendly technology built into it. Instead of using floppy drives, microdrives were again used as mass storage, which were improved, but still suffered from the basic weakness of all microdrives. In addition, Sir Clive, who was knighted by the Queen in 1983 at the instigation of Margaret Thatcher, lost interest in computers.

THE C5 ELECTRIC VEHICLE

His interest had been focused on the development of his electric vehicle, the *C5*. The *C5* had been in development since 1979, was introduced in January 1985, and was intended to revolutionize mass transit. The aim was for the vehicle to travel around 32 kilometers on one battery charge at a top speed of 24 km/h.

However, sir Clive's expected sales could never be achieved, partly due to the abolition of the NEB, the National Enterprise Board, from which Sir Clive had most likely also benefited. He went bankrupt, and on April 7th, 1986, Sinclair Research Ltd. was sold to Amstrad. This was accompanied by the assignment of all rights to the Sinclair product name.

CAMBRIDGE COMPUTERS LTD.

The last computer initiated by Sir Clive was the *Cambridge Z88*, which was built and sold from April 1987. This computer met a similar fate as so many of his computers before. The software features were ahead of its time. In fact, the design and integrated software package called Pipedream were strongly reminiscent of

a modern PDA of the late 1990s. Calculator, calendar, clock, diary, terminal emulator, spreadsheet and word processor. It was not PC compatible, but surprisingly it was largely compatible with the BBC Micro thanks to the use of an adaptation of BBC BASIC.

THE YEARS AFTER

In the years following the *Sinclair QL*, Sir Clive became more and more withdrawn. After the Z88, he still released the *Zeta* from 1994, a zero-emission drive for bicycles that could be mounted on the bicycle frame and accelerated the bicycle to 15 miles per hour using an electric motor. The Zeta sold successfully and was redesigned several times. The Zeta recharged itself while riding and weighed only 11 kg. Unfortunately, it went the same way as the *C5* and production was discontinued after only six months. In 2002, the *SeaScooter*, an underwater drive for divers, appeared, and another year later the *Wheelchair Drive Unit*, an electric drive for wheelchairs.

A little known facet of him is his professional poker game. As one of the first well-known faces of poker, Sinclair appeared on the *Late Night Poker show* on British television starting in 1999. In this poker round he was eliminated first, but in 2003 he won the first season of *Celebrity Poker Club* and managed to take home 25,000 pounds.

Sir Clive Sinclair received several honors for his contribution to establishing the personal computer industry in England. In 1983, he was awarded honorary doctorates by the *University of Bath*, HeriotWatt University and the University of Warwick. In the same year, he was knighted by the Queen. In 1984, *Imperial College* London honored him by making him a *Fellow*, an honor roughly equivalent to that of an honorary German citizen or member.

Another little-known facet is that he described himself as an atheist. During an interview in the Independent, he was asked if he believed in God. His response

was *»Oh God, no! I was once asked if i wanted to sponsor a child. I replied I can't, I'm an atheist. I think I had a two godchildren once, but I can't say I cared for them. I kind of lost them or forgot about them.«*

He had an IQ of 159 and was first a member, then from 1980 to 1997 the chairman, of the British *Mensa*, a club of people whose IQ must score at least 130 to be admitted.

Sir Clive worked on new ideas until the end. It is interesting to note that Sir Clive was not a fan of computers and calculators. He preferred his slide rule, which, according to rumors, he always carried with him. He was married twice. From 1962 to 1985 to *Ann Briscoe*, most recently from 2010 to *Angie Bowness*, from whom he separated before 2017. The first marriage produced children *Belinda*, *Crispin* and *Bartholomew Sinclair*.

AND NOW?

Now Sir Clive Sinclair has died after a long and fulfilling life. He leaves behind a multifaceted legacy. His ideas were forward-looking, and many of these ideas have in one way or another become part of our everyday lives and are firmly integrated there. He was a restless spirit who wanted to be challenged to the very end. In the end, it had become quiet around him, which was certainly due to his advanced age. To call him an icon of the computer world is absolutely justified. He stands right next to Konrad Zuse and Steven Jobs, leaving a friendly memory with his human features.

Sir Clive Sinclair, rest in peace. We will not forget you.

jg

Sources:

Wikpedia German & English, Planet Sinclair, The Guardian, CardsChat.

JOHN WILSON - A BALROG LEGEND

BY THOMAS EBERLE

JOHN WILSON was born in Edinburgh (Scotland) in 1947. After several professional stations both with the RAF (Royal Air Force) and as a surveyor and TV engineer, he turned his hobby into a profession in 1982 and founded *»ZENOBI SOFTWARE«*. With this software house he served the growing market of adventure games, first for the *ZX SPECTRUM* and later for the *ATARI ST*. Several self-programmed games were distributed with the label *»THE BALROG«*, and under the label *ZENOBI* there were also distributed titles for up to 50 other authors. One of the most famous games might be the first big hit »*THE BOGGIT*«, a parody of »*THE HOBBIT*«. But also the series about the stories that can happen in a small toilet house gained a high profile with »*BEHIND CLOSED DOORS*«. His writing style has always been unique and his imagination knew no bounds. Many of his stories were in the fantasy genre, but in general *JOHN WILSON* could turn any story into an adventure game.

After more than 200 adventure games *JOHN WILSON* decided in 1997 not to publish any new titles. Instead, he offered the adventure classics for emulators, e.g. the »*ZENOBI COLLECTION CD*« including all *SPECTRUM* titles together with the emulator, which he distributed from 2002 on.

In 2018 a bit of a rebirth of *SPECTRUM ADVENTURES* started and *JOHN* WILSON was a part of it. Under the pseudonym »*PENSION PRODUCTIONS*« he continued several successful series, and in total he published 12 more games for the ZX *SPECTRUM*. He also converted several of his games with the tool »*ADVENTURON*« and made them available to play on the PC browser. He documented his doing until the end in his blog with downloads on

https://zenobigames.blogspot.com

JOHN WILSON passed away on May 31, 2021 at the age of 74. His works remain unforgotten.

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BERNIE DRUMMOND DIED UNEXPECTEDLY

BY CHRISTOF ODENTHAL

In November 2021 BERNY DRUMMOND passed away. Together with programming legend JON RITMAN he developed classics like *BATMAN (1986), HEAD OVER HEELS (1987) and MATCH DAY II (1987).* He was responsible for the outstanding and distinctive graphics, possessing a very special sense of humor, as with this robot in *HEAD OVER HEELS*, which bears a remarkable resemblance to Prince Charles.

Jon and Bernie met through the band »*THE POSITION*« in which Bernie played the drums. After Jon saw the game »*KNIGHT LORE*«, he also wanted to write an isometric 3D game and came up with the 60's TV series »*BATMAN*« with *ADAM WEST* while searching for a famous protagonist. Through his work on »*MATCH DAY* 1« he knew he needed a graphic designer and he knew that Bernie drew in his spare time. So it came to this collaboration and the first computer game ever with Batman.

co

FRANK DOPIERALA INTRODUCES HIMSELF

I think every one of us currently works, whether privately or professionally, with absolute hi-tech systems, regardless of whether it is a Windows or Apple or UNIX/Linux system. There is basically nothing you can't do with these machines, not to mention the capabilities of smartphones. As natural as the use of such devices has become, it has unfortunately given me at least one thing in recent years, and that as a 100% passionate techie at heart: boredom.

As far as computers are concerned, my early days were accompanied by an almost inexhaustible curiosity and enthusiasm. For me, this started with a borrowed ZX81, then continued with my first own ZX Spectrum as a Christmas present. It was the 16K variant, as we couldn't afford the 48K model. And whether it was getting to know my system or buying the next big technological leap: enthusiasm, interest, curiosity and the urge to explore always seemed unabated. In my computer life history this included the systems ZX81, ZX Spectrum, QL, ATARI 800XE (however only very briefly), ATARI 520ST (often improving with very much tinkering again and again), ATARI Falcon030 and in this row finally an ATARI TT, which represented my main computer from 1996 for full four years, together with ATARI laser printer and CD burner.

All these systems and their successors had one thing in common: A clearly recognizable performance increase in graphics, CPU, sound and RAM, and a community with which one met and exchanged and which also knew these systems and could not only operate them.

From the year 2000 my Apple era began. First by a donated PowerMac 7200 with 75MHz PPC. Here I made my first experiences with Mac OS 7 and the following Apple systems. Shortly after that I bought my first own PowerMac G4 400 MHz with Gigabit Ethernet and experienced the same excitement with it as I did with the ZX Spectrum at Christmas.

Also with the G4 it remained exciting! At the beginning with Mac OS 9, after the hardware was supplemented again step by step by me by more current components, Mac OS X followed, but i skipped 10.0 and started with Mac OS 10.1, since 10.0 seemed too early to me. But: WHAT a system!!! WHAT elegance and beauty! Apple continued for me at that time what Sinclair and ATARI could always serve: technological charm and enthusiasm, although or just because of the not-perfect and all-encompassing given possibilities. My technical enthusiasm lasted until the beginning of the Year 2010, but then subsided, temporarily "replaced" by the iPhones and the iOS development. And if it wasn't Apple hardware at the time, I was following the Mac OS X development with GREAT anticipation and also couldn't wait to hold it in my hands and install it: Mac OS 10.2 "Boaahhh!!!" - Mac OS 10.3 "Whooow!" - Mac OS 10.4 "Oh my Gosh!!".

As is so often the case with insidious processes, you don't even notice the whole progress directly, because you continue to do what you're doing. At some point, however, I noticed a certain dissatisfaction or unfulfillment, and it took me a while to realize where it came from: it was obviously the state of the art. If an iMac with a 5K Retina display or an iPhone 4, also with a Retina display, could actually elicit another "Woooaahhhh!!!" of excitement in me, the systems had reached a technological level, which has basically only been accompanied by marginal developments since then. Even the i7 processor hadn't grown in terms of performance, compared to its prdecessor. And even though the current M1 processor development probably represents a milestone in computer performance, it doesn't excite me anymore, the emotion is missing.

Original text Frank: *»The workplace of genius«*

Why is that? For me, there are certainly various reasons: If I was still able to repair the display backlight, exchange the HDD for an SSD or replace the graphics card myself on an iMac from 2011, it stopped after that. The motherboards became highly integrated SMD miniboards, whose miniaturization could be marveled at, but nothing more. Now someone could interject: "Hey! Then build a PC from single components! You can still get down to business with your hands!" Yes, this is a justified objection, which certainly explains why there are so many PC hobbyists out there. But as far as I'm concerned, that doesn't help me. One reason is, that I don't like Windows systems; I know them just as well as Apple systems, since I've been working exclusively with Microsoft systems since the mid-90s, and it's really unsatisfying for me: Screw the mainboard into a tower, insert the DIMMs, insert the graphics card, install the SSD, install Windows - boring. There is no (r)evolution anymore, there are only several improvements or further developments in details.

If I still look at a ZX Spectrum or ATARI ST mainboard today, my heart still skips a beat! As far as I'm concerned, I still need real DIL chips, which can be changed and whose PINs can be measured. Sure, the whole thing is due to my own developmental history, of course, but it's not abstract! A cynic might think I'm crying for the old days and have missed the connection to today's technology. Perhaps. But really, it doesn't matter, because the cynic is looking at it purely cognitively. Who still has fun with a ZX Spectrum or an ATARI ST, does this only to a certain part cognitively. The very largest part will be emotionally driven! Let's not fool ourselves: Technologies become more and more complex. Back then, the learning curve increased less and only a few technologies could be learned at the same time and across the board. If you wanted to fully understand the Spectrum, (and this was what we wanted!), you had to learn the hardware, but you also had to learn the software, ROM, memory structure, etc. All this was possible! And in a manageable period

of time. And if you then wanted to become active on the basis of the knowledge gained, you could do this by rebuilding hardware extensions, typing BASIC programs or writing them yourself, perhaps also writing machine code programs yourself, etc. Everything was possible in a short time. The fact that even more could be extracted from the hardware and software was and still is shown by all the DEMO coders, who conjure up things from our "favorites" that actually still amaze you - BECAUSE the devices were not designed for this!!.

Today, highly complex technologies are all interconnected in their own right, and you have to keep your finger on the pulse to avoid being left behind. A computer today is no longer just a piece of hardware with ROM, these are incredibly complex systems intertwine seamlessly: hardware, OS, with an insane number of layers and complex security mechanisms, different systems: Windows, macOS, Linux in umpteen variants, WLAN with all its protocols since 1999 incl. security encryptions, Bluetooth 2.0, 3.0. 4.0, 4.2LE, 5.0 etc., network technology and protocols for all kinds of interaction, Internet, security architectures in EACH of these technologies and so on. This complexity can be professionally challenging, supportive, and possibly even enjoyable or motivating, but it no longer has anything to do with the unbridled passion of the early years, at least for me.

OK, OK... who manages to include THAT into his professional life, has landed a Jackpot in the lottery anyway, but i want to point out about the private / personal technical share. Over the last years I have accumulated a lot of Sinclair ZX computers and accessories, for fun, but also for restoration and resale, including many original accessories such as ZX Microdrives, ZX Printer, Sinclair interfaces, etc.. I will now dedicate myself to this task again - in peace, with my demand for "perfection" and with joy - the way is the goal, among other things. I am curious: What is your story? What drove or drives you? I would be happy to read your story and your way, too!

Many DIL greetings Frank

THE PROJECTS

A few months ago the urge came up again in me to look for something "new". The basement is already filled with Spectrum, Spectrum accessories, software as well as hardware, but... that didn't stop me from browsing Ebay for "something" that appealed to me. Then it crystallized for me little by little, unconsciously, that it should be a ZX Spectrum 128K +2, no +2A or B and no +3, because after first research in the web the +2 was probably most similar to the original 128K and I didn't own such a model from the Amstrad era yet.

Whatever got me there, I realized much later - maybe I had rose-colored glasses on before?!?

Of all the offers, I probably picked the worst: the ZX Spectrum was visually, technically, and in terms of accessories in very bad condition. I received the Spectrum of my choice in June from a dealer in England - without any accessories and in a visually, well, moderate to fair condition. Since I was quite busy at work and in my private life in the following weeks and months, I actually didn't get to test it until September and promptly had to find out: The thing doesn't work! Since also the red LED remained off, I first hung my multimeter on it and had to find out that even the 9V from the power supply was "shortened" to a proper 0V - oops!

Fully refurbished 48K Spectrum, Interface 1 with vDriveZX

In the photo of the original Ebay ad, this Spectrum was shown with a lit red LED, but not on a screen. At first I wanted to get upset, did this also briefly inwardly, but then I realized that I intended to subject this Spectrum to a "cure" anyway. If there were a few parts more or less defective, it didn't matter anymore. Only the purchase price was definitely too high. One thing in advance: The Internet with its many, many Speccy pages, helped me VERY much, and since there is probably always something to improve with the various Spectrum models, I had decided to look at these optimizations and to do them in the case it "sounds useful". By the way, this included some very good tips on the page of Scott-Falk Hühn, https://s-huehn.de/, best thanks and many greetings at this point! But also many others were consulted. If there is any interest, I would be happy to follow up with a more detailed report on the repairs and activities undertaken, including the relevant sources. At this point, let me briefly summarize: The originally intended "electrolytic capacitor swap" turned into an unexpected project. Briefly summarized, I did the following on this Spectrum: Replaced all electrolytic capacitors, replaced transistors, cleaned the ULA heatsink and ULA and applied new thermal paste, replaced RAM chips, replaced voltage regulators, cleaned the entire case including the keyboard, repaired the modulator, re-soldered the joystick ports to ATARI standards, cleaned the cassette deck and applied new drive rubbers, and installed new original rubber feet and case screws, some of which were missing. After I finally repaired the power supply on the Spectrum board, the Spectrum only shows a horrible chaos picture. Then I remembered something: In issue 228 of the SUC-SESSION, among other things, the ZX Spectrum Diag-Card for checking Spectrum hardware was introduced. At that time I thought "Interesting! But I don't need it!". At the latest now this changed. So I ordered the diagnostic card as a kit at ByteDelight.com, so I packed the whole +2 junk first to the side to solder the diagnostic card together in a night action. Sometime around 1.30 o'clock at night i had finished the Diag-Card, and I could plug the card to the +2. Result: among other things two RAM chips were defective, one from the lower RAM range, that was the reason that only random pattern were displayed. Since then I love this card and could also use it to diagnose a corrupt EPROM I had burned for a Harlequin 48K kit I had also ordered and assembled at ByteDelight about 2 years ago, using my ATARI TT and the junior prommer. Because I like to use spare parts that were common at the given time I had ordered at Ebay compareable old NEC EPROMs of the type 27128. They

were actually from the 1980th or at least approximately. Unfortunately, this also showed in their function. Freshly burned - everything top! A little later, however, some of these EPROMs seemed to disintegrate their information. But back to the RAMs: I searched in the iNet and found them quickly. I ordered some of them in the Sintech store, soldered out diagnosed chips, soldered in sockets, inserted chips - runs perfect! As I said, about the repair and restoration work I could give some more details if there is interest, including corresponding sources on the Internet, which I have used.

The next project around this +2 involved a switchable ROM. For this I got myself a 27512-EPROM (64 kilobytes) over Ebay and burned this with the original Sinclair 128K, as well as the original 128K+2 ROM content, so that over a switch both the original +2-ROM is available to me, as well as the original Sinclair 128K-ROM. I find this copyright Amstrad message just gruesome - it should say Sinclair!. The EPROM is already burned, but still needs to be tested and then a small, discreet toggle switch has to be attache to the case. After I was done with the +2 then, I was both happy and a bit sad, since I had now again "nothing" to do... At that moment, I decided to get the rest of my ZX accessories from the basement and continue the restoration and repairs on these. Primarily I was and am interested in various interfaces 1, as well as some Microdrive drives and cartridges. This was a good opportunity, to built my vDrive into one of the microdrive cases.

https://vdrivezx.com/vdrivezx/

My main goal was and still is the restoration and repair of the real ZX Microdrives, so that I can sell them to interested people. Here I had to learn painfully that the pressure felts in the microdrive cartridges mostly are defective and crumble nowadays. Therefore, no cartridge should be activated unless its felt has been removed and replaced. Since my stock, including the QL cartridges, amounts to about 50 pieces, I had to "re-felt" all my existing cartridges first. Fortunately, there was a seller on Ebay who offered these felts already cut to size, since I'm too lazy for that.

Today, all cartridges are equipped with new pressure felts and almost half of the microdrives with new electrolytic capacitors, as well as "supplementary capacitors", see:

https://www.bytedelight.com/?page_id=1623,

AND: New drive rollers!!!

Thanks to **https://www.sellmyretro.com** I was able to get hold of some of the coveted drive rollers in NEW condition! Unfortunately, only one of the treated Microdrive drives actually runs reliably and without problems until today. The others do read the cartridges I formatted or wrote with the drive working fine, but are themselves currently unable to format cleanly. To make sure that I could compare an interface one in case of error, I restored two Interface one in the meantime: Exchanged the electrolytic capacitors, checked the solder joints, checked that they have the ROM V2, cleaned the contact springs to the Spectrum and the board contacts to the microdrive ribbon cable. The tests with the two Interface 1 I then carried out both with an already completely restored and subsequently with the Diag card tested original 48K Spectrum, and with a 128K Toastrack Spectrum. I also gave the connecting cable a corresponding procedure by cleaning and tightening the contacts and replacing the ribbon cable. Since I ran out of components to restore the other drives and am currently waiting for them, I probably won't be able to continue here until next weekend. However, I found a hint on Ben Versteeg's ByteDelight website, which I will implement directly: Solder a 47nF capacitor to the ULA PINs of the supply voltage... It remains exciting!

I hope you can do something with it.

Many sunny greetings and I'm looking forward to the new issue!!!

Frank

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PSION VU-3D

BY HARALD LACK

Hello users,

I have decided to look back at application programs that are available on the Spectrum and have also enjoyed a certain popularity, in a loose sequence, in a retrospective, so to speak. Of course, I would like to primarily address those that had used (or still use at least occasionally) ***VU-3D*** like me. Especially in the early days of the Spectrum there were a number of software houses that published more or less useful applications for our computers. One of the best known in the early 80's was Psion. Some of the programs were marketed with the Spectrum to illustrate the capabilities of the computer. As a rule, however, these were mainly games. But applications also came on the market relatively soon. At that time - and also later - VU-3D interested me and tied me to the Spectrum, because the program promised a lot, which was rather reserved for workstations and mainframe systems at that time, namely the construction of three-dimensional bodies and their rotation or manipulation in three-dimensional space.

To be honest, the technical capabilities of the Spectrum in terms of memory size, CPU and graphics performance were rather meager, but that made it all the more exciting. That's why I would like to start my first look back at the known applications with ***VU-3D***.

First of all, a few general data about the requirements and features as they say today.

A Spectrum 48K was absolutely necessary as hardware base, because 48K RAM was needed. As a standard storage medium in 1982 only the cassette came

into question anyway, which contributed to quite longer loading times, but at that time we didn't know anything else and had to be patient. Besides, the program was not that big, so the loading times were still quite reasonable.

VU-3D allowed the construction and the associated perspective representation of a body in space. In addition, this body could be freely rotated and moved in space. In addition, the image could be enlarged and reduced, and lines that were actually not visible could be deleted. Furthermore, there was the possibility of free color selection including shading, saving and reloading of bodies as well as applying changes. That sounded quite promising.

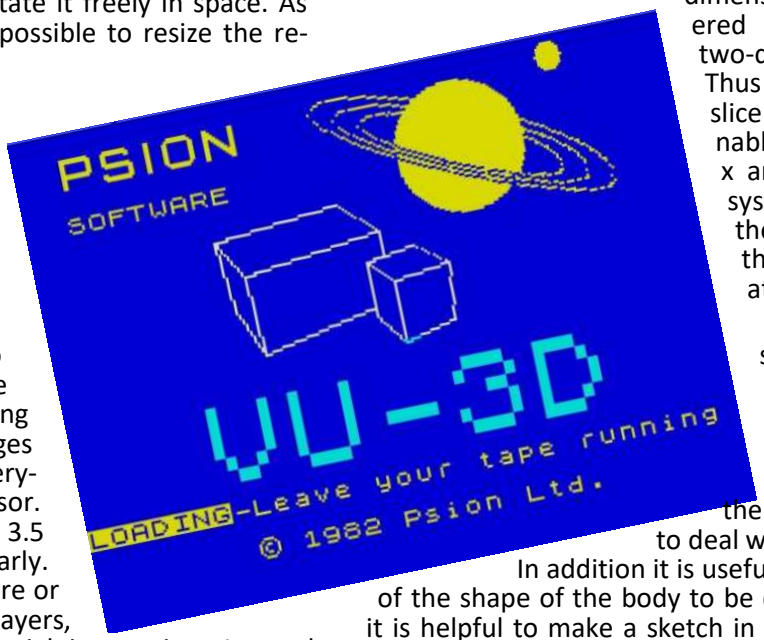
So much for the specifications that the manufacturer gave his product. Of course, this made me curious right away.

In the following, I would like to tell you about my impressions and experiences with the application. I will briefly describe how to use it and share my findings at the respective points.

Here we go...

VU-3D is - as already mentioned - an application for designing three-dimensional bodies in space and manipulating them. Of course, you should have thought a little beforehand about what kind of figure you want to design, because that makes the construction quite easier. I will explain how to do this later in the text.

Once the figure is constructed, you can examine it from various angles and rotate it freely in space. As an additional feature, it is possible to resize the resulting figure using a zoom function. All this happens on the screen, which should preferably be a color monitor/TV, in the so-called "high-resolution" spectrum screen the object is shown in different shades by different perspectives. Already here I would like to mention that you can see that the Zilog Z80 is working at its limit, because changes and rotations demand everything from this processor. Sometimes you notice the 3.5 Mhz CPU clock quite clearly. The construction of the figure or figures is done in different layers, which then result in a spatial impression. It surely doesn't need to be mentioned that the Spectrum-typical periphery is useable, i.e. you can print and save the figure.



Here I would like to clarify the *»3D«* in the program name: of course the constructed figure is only displayed two-dimensionally on the screen, our eye also sees it that way, but the third dimension is practically created by viewing it from different angles. Here, the program takes over the task of calculating a three-dimensional object from the two-dimensional specifications and data.

The three-dimensionality is created by "walking around" the object and viewing it from different distances, just as we (can) do with a real object in the wild. This allows us to construct or pretend a three-dimensional body for our brain and make the object appear as realistic as possible.

So much for the theory behind the application. Now lets move on to the operation of the application.

After loading the program, the user is faced with the question of whether he wants to load a finished data set or start constructing a new body. Here, the second will usually apply, especially if one has never worked with the program before. Simply press "2", then ENTER, then 6:Display.

With the help of the command **CREATE** the user has the possibility to start the construction of a new figure. Once we have selected this option, we see a menu bar at the top of the screen from which we can select the relevant commands. At the bottom of the screen, the current data are always visualized. The screen at **VU-3D** and this representation accompany us throughout the program. The selection of commands is done by pressing the corresponding key or symbol, as you might have guessed.

How do you construct a three-dimensional figure?

This is done in a very simple way, by cutting the imaginary figure into slices (the so-called layer model) and then entering the outline data for each layer. Here we speak of the so-called z-planes. The numerical value indicates the distance of the respective plane to the reference plane (z=0). Thus the construction of a figure or a body runs in such a way that the three-dimensional body is considered slice for slice in its two-dimensional shape. Thus each point of the slice is uniquely determinable by two coordinates x and y. The coordinate system is displayed on the screen in such a way that the axes intersect at the lower left point.

This may sound a bit strange at first, but it will become familiar to us when working with ***VU-3D.***

Now we have all the basic requirements to deal with the screen display. In addition it is useful to have a rough idea of the shape of the body to be constructed. Whether it is helpful to make a sketch in advance is something everyone can decide for themselves. Personally, I tend to approach the construction in this way. When thinking about the coordinates, it should be taken into account that it is best to place the z-axis where the body has its axis of symmetry, i.e. where it can be mirrored. The two-dimensional sectional surfaces are then perpendicular to the z-axis, which we want to imagine in this way.

I would like to describe this briefly with a simple example, so that it may become clearer: suppose we consider a pyramid. Here the z-axis runs vertically down from the top and intersects the bottom surface at its center. The x- and y- axes then form the horizontal planes of the individual intersecting surfaces. I hope this has made it clearer.

Grid model

Body model

The considerations regarding the individual axes are very important and you should have a sound understanding of them before you start with the actual construction of the body. Of course, everyone is free to try things out, which sometimes helps.

Now, however, let's first look at the individual items in the **CREATE** menu. These are:

- **OPEN** Starts a construction
- **CLOSE** Closes a construction
- **FIGURE** Selects a specific polygon in a defined plane (sounds more complicated than it reality)
- **MAGNIFY** Magnification
- **REDUCE** Reduction
- **NEXT Z** Determine next layer (slice)
- **QUIT** Return to main menu

In addition, one can use the familiar arrow keys on the Spectrum keyboard.

After we have decided to design something by means of **CREATE**, the construction can begin with the **(O)pen** command. Here we start with the design of the figure on the level z=1. When we press **»O«",** the upper menu will change and a cursor in the form of a crosshair will appear on the design area. We can see the current position of the crosshair in the status bar, this can be steered around as we like using the cursor keys. We see the base of the slice as a closed line.

Now we have to move the cursor to the place where we want to start constructing the figure. Once there, we need to press »S« for Start and then move the cursor to the place where we want the line to end.

By pressing the **»L«** key for line, the two defined points are now connected by a line.

That wasn't so hard, was it? Now continue in the same way until all lines that should show the desired outline have been drawn. When we have finished, we may save everything with »**E«** for **End**.

We then automatically jump back to the **CREATE** option. Now it can happen, and will certainly be the case at the beginning, that some line does not look the way we imagined it.

No problem. By pressing **»D«** for **DELETE** we remove the last line again. On one plane (slice), of course, several outlines can be drawn, which will be necessary depending on the type of body to be constructed. This is represented in the program by several separate body outlines. In order to draw several outlines on one plane, one must go through the previously described procedure for each outline, i.e. we start a new outline on the same plane again with **»O«** and then continue as described above. However, at this point we have to live with the following restrictions: the lines of individual outlines must never overlap, i.e. different bodies can never intersect. However, the program recognizes such a mispositioning at Open and prevents the drawing of such lines. Thus, the cursor may only be positioned at a "permissible" place on the drawing plane. By the way, the End command also recognizes such a misplacement. Therefore, here again the tip to think about this before the construction.

Let's turn our attention to the **FIGURE** command. The program offers us the possibility to draw a new outline by **OPEN** or, and this is often very helpful, simply by repeating an outline from a previous z-plane to place it successively in different z-planes. There is also the possibility of using the **MAGNIFY**, **REDUCE** commands and the **CAPS SHIFT** key in conjunction with the cursor keys to enlarge, reduce or even move individual outlines.

And how do you do that? This is where the **»F«** command for **FIGURE** comes into play. Pressing the **»F«** key selects the nearest outline for modification. You can recognize the outline currently being edited by the line type, because it is shown dotted.

As the name suggests, the **MAGNIFY** command allows you to enlarge outlines. If an outline has been drawn with **OPEN** or taken over unchanged from a previous z-plane, it can now be enlarged with the **»M«** key for **MAGNIFY**. By pressing the **»M«** key for a longer time, the magnification is continued to the desired degree. The exact opposite of this is the **REDUCE** command. Pressing the **»R«** key will reduce accordingly. Finally, for the sake of completeness, it should be mentioned that the cursor keys can be used to move outlines in the respective directions.

Since a figure usually consists of several layers, **VU-3D** naturally also offers the possibility to select other z-layers. To do this, press the **»N«** key for **NEXT Z** after you have finished drawing on the current layer and the next z-layer will be selected. At the bottom of the status bar we can again read which z-plane we are currently moving to. By pressing the **»N«** key, we then select the respective plane on which we now want to draw. On the new z-plane, the last drawn figure appears again and can be edited with the commands just described. It should be mentioned here that a section of the construction from a z-plane (except on the first!!) can be closed with the command »**CLOSE«** or started again with **»OPEN«**. Thus it is then also possi-

ble to draw cavities or recesses. This is done by drawing one figure completely inside another. We have already heard that lines must not intersect or penetrate each other. However, it is permissible to draw several bodies very close to each other, so that the impression of a composite body is created. However, this is not an issue until you are really familiar with the rest of the constructions.

When we are done drawing a body or object in a plane, we can finish it there. First you select the outline with the **»F«** key and then by pressing **»C«** this figure is completed in this layer. However, you can continue with the construction on other layers where the objects are not yet completed until the objects are also completed on all other layers. However, this does not have to be done for each layer individually, especially for objects with many layers. When we are sure that everything fits we can use the **QUIT** command and the objects of all layers will be completed.

So now we are actually done with the construction of our figure. Of course, now we would like to have a look at our creation in three dimensions. It is important to note that **VU-3D** basically knows three different display modes, namely the display as a grid, as a grid without invisible lines and the solid display with shading. Regardless of which one we chose, all three represent the body in three-dimensional perspective. The user now has the possibility to view the body from different locations or viewing angles, as well as from different distances or even from within the body. Of course, this makes us curious at this point.

A few words about the perspective view. The user should try to imagine the following: the user moves freely on the surface of a sphere, with the displayed object approximately in the center of the sphere. Once you have seen it, you may have a better idea of what this means. In the menu we encounter the **DISPLAY** option, which allows the viewer to adjust the diameter of the sphere as desired and to move on the surface in various directions. Sounds complicated at first, but it is not. When we select this option, our object is first displayed as a grid. Now we can define the angle of view and the distance, where »**N«** stands for **NEAR** (near) and **»F«** for **FAR** (far). With the arrow keys you can set the angle of view and then you are ready to go. Now you can delete the invisible lines and shade the body. This requires some patience, because our computer has a lot to do with this task. If we have previously pressed the **»F«** key for **FAR**, we will see the object from a greater distance, consequently smaller. We can slow down the process a bit by pressing **»F«** in conjunction with the **CAPS SHIFT** key. This allows us to adjust the distance more finely or precisely. Conversely, we can get closer to the body with the **»N«** KEY, so it becomes larger. But not only that, if we keep pressing **»N«** we will eventually move inside the body.

Now briefly about the movement on the surface. I already mentioned that we can use the cursor keys for this. Analogous to the cardinal points, we move west with **»5«,** south with **»6«,** north with **»7«** and east with »**8«. CAPS SHIFT** is again used for fine adjustment.

MAGNIFY enlarges the display but, unlike **NEAR**, does not change the perspective. The opposite command is **REDUCE**, which reduces the size without affecting the perspective. With **»Q«** for **QUIT** we get one level higher in the menu again. When we have made all our settings, we can now use the **PICTURE** command to color the body and remove the invisible lines, or to make it appear shaded as a solid. The following commands are available for this purpose:

- **SHADE** Shading
- **HIDDENLINE** Delete invisible lines
- **PRINT** Output to the (ZX) printer
- **COLOUR** Color selection
- **KEEP** Save
- **QUIT** Back to **DISPLAY**

A few notes about shading. One way of spatially representing a body is to structure the surface according to the selected perspective or observation points. This can be done by the command SHADE. In order to save computing time, the side not visible to the observer is not shown. This makes the algorithm faster. But the algorithm can do even more. **SHADE** maps a different impression of brightness. This corresponds to the direct illumination by a light source in combination with diffuse scattered light with diffuse reflection of the light source. Whoever wants to understand this, we only use the result. When we use the **SHADE** function, **VU-3D** asks us for the location of the light source. The possible selection is indicated at the top of the screen. First of all, the following information must be given:

- **a** Light source above
- **c** light source central in the middle
- **b** light source below

then follows.....

- **l** Light source left
- **c** light source in the center
- **r** light source right

After that the processor glows and the calculation starts, which can take some time.

Already above we talked about deleting the invisible lines. This is where the **HIDDEN LINE** command comes in, which tries to give as authentic an image of the body as possible. The existing grid image of the figure is preserved in any case. However, the lines that would be hidden by surfaces in nature are deleted. The more complex the body is in relation to its surface, the greater the computational effort. This is where you can get a teatime, because this can take some time. With PRINT we still have the possibility to put our creation on paper. Finally, we can use the **COLOUR** command to specify the **color** of our object and the background.

When we have finished our work and found it to be good, we might want to preserve it for posterity. The **KEEP** command saves our work. It should be noted that the **KEEP** command differs from the usual SAVE in that it saves the object in its current position and view. Thus it is saved as a screen and can be read in again without the program itself via **LOAD "" SCREEN$.** With the **SAVE** command, on the other hand, the complete data field is saved. The **»Q«** key takes you back to the **DISPLAY** menu.

Sometimes after saving new ideas have to be realized or corrections are needed. With the command **MODIFY** you can still do this, as long as the changes are not too fundamental. If this is the case, the only thing that helps is to start from the beginning. Therefore again my hint at the beginning that one should first think about the object. Basically **MODIFY** works analogous to **CREATE**, but the representation starts at the level z=0. The remaining commands are identical. To delete a data field that exists in the computer, there is also the command ABANDON. This clears the memory and you can start again or load a file.

So, that's it for my review of **VU-3D**. The operation of the program may seem a bit hard to get used to at first, but with a little practice it is quite intuitive. In any case, working with **VU-3D** has always been a lot of fun for me.

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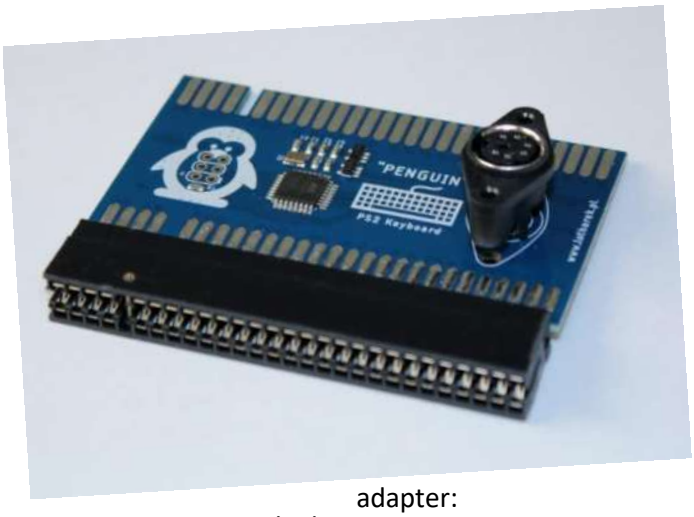
THE PENGUIN PS2 INTERFACE

BY JOACHIM GEUPEL

On September 11th and 12th 2021 the **SPECTRUMANIA** was open in Wittenberg. Thomas and I drove from Cleebronn to the east of the republic and I was once again allowed to drive an automatic, this time even a hybrid. It's a great car, the new one from Thomas - but that's not the point here. Thomas took a part of his stock to sell SPECTRUM accessories in Wittenberg - among others to me - namely a PS2 keyboard interface for the ZX SPECTRUM, the *PENGUIN-BOARD*, which can also be found on *Lotharek's* website.



First of all: The interface works. I connected it to one of my SPECTRUM 48, first via the BUS-SPLITTER and then via my BACKPLANE, it worked both times, but via the BACKPLANE with some problems. It was only under protest working with the SPECTRUM 128, the »TOASTRACK«. I was able to operate the TOASTRACK, but the DIVIDE refused several times to access the files. So: the »PENGUIN PS2-INTERFACE« works, at least on my computers, but only with the ZX SPECTRUM 48 without errors. On the SPECTRUM 128 TOASTRACK and on the 128+2 GREY it works with restrictions and on the +2A/+2B- SPECTRUM +3 it can be fatal either for the interface or the computers or even for both, because the bus connectors are different.

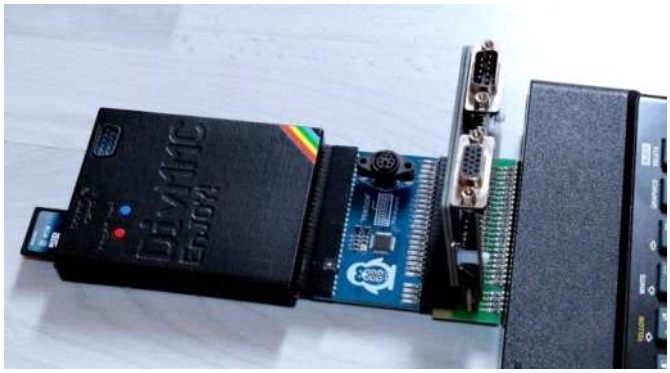
The *PENGUIN* is based on the ATMEGA8A controller from Atmel. On the board there are only the controller, a 20MHz crystal, some resistors and capacitors and two more semiconductors, which I don't know if they are transistors or something else. The complete interface is based on the functionality and programming of the ATMEGA. It was developed and programmed, at least according to the imprint on the board, by Przemyslaw Krawczyk.

On the website of *Lotharek*, as well as on that of SinTech, you can read that with the connection of the interface to the Spectrum, the original keyboard of the Spectrum switches off and can no longer be operated. At least on my interface and on my Spectrum computers this is not the case. All the keys on the original keyboard were still all accessible and operable. Also, these websites say that USB keyboards with PS2 adapters work with the interface. This is only partly correct. The USB keyboard must be compatible with a PS2 keyboard. A USB keyboard that has a corresponding USB controller requires that the USB protocol is followed. The PENGUIN does not adhere to this because, as the full name implies, it is a PS2-ZX- SPECTRUM INTERFACE and not a USB interface.

I found the keyboard assignment of the interface difficult and very irritating. On both websites there is no key mapping to be found, neither as a table nor as a graphic. The link given on the page of Lotharek leads to a Russian-language forum, that i visited with the help of the online translator DeepL. There is detailed information about the development of the interface. There is a lot of discussion about the development, timing problems and some more, but a key assignment table is not to be found there either. So I made a graphic for the key assignments (long live PAINT!). You can find them in the appendix of this article. However, errors are possible - so the assignment is without guarantee.

The Penguin together with the DivMMC and the VGA Joy on a Y-adapter:

According to the Russian forum and Lotharek the function keys F10 and F12 are also assigned. My interface has no mapping on these keys, at least as far as I have tried to find out. Also a few other keys are without function. Maybe I have an older software version on the ATMEL controller, I don't know. After all, this version is exactly what is stated on the Lotharek page.



The PENGUIN together with the DIVMMC and the VGA JOY on a Y-adapter

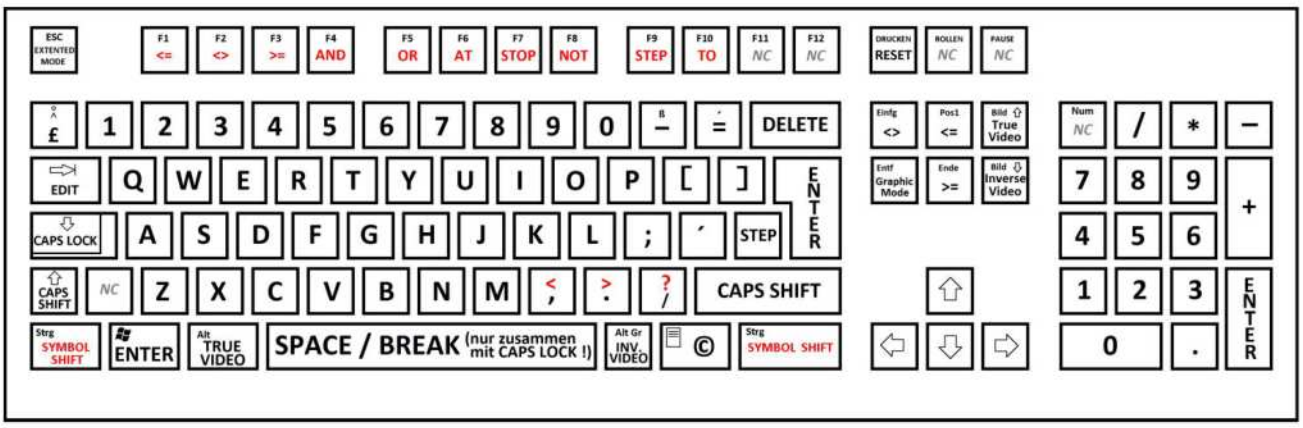
When testing the PENGUIN, I encountered another problem. The combination of VGA-JOY, DivMMC EnJOY! and PENGUIN can cause the whole system to run unstable. The PS2 interface has a looped-through bus, so another additional device can be plugged in. At least with my Setup the combination DivMMC - PENGUIN and VGA-Joy worked unreliable and unstable in the mentioned order. I put a Y-adapter on the Edge Connector, the DIVMMC on the vertically upward branching connector, on the extension the PENGUIN and last the VGA JOY. The SPECTRUM 48 booted, i.e. the file system of the DIVMMC was loaded, programs that I wanted to load via the NMI button could not always be loaded. If it succeeded at some point, it could be that the program stopped and the complete system froze. Sometimes programs were loaded incomplete. The error could be reproduced. Interestingly, the combination as shown in the picture worked. In my opinion, timing

problems are the cause of the strange behavior. Of course I also tested the combination on the BACKPLANE of PROJECTSPECCY.com. Here the problems were even bigger. The BACKPLANE leads, as I had to determine already often, to runtime problems of the signals, which are led over it. The lines on the backplane are simply too long for some interfaces.

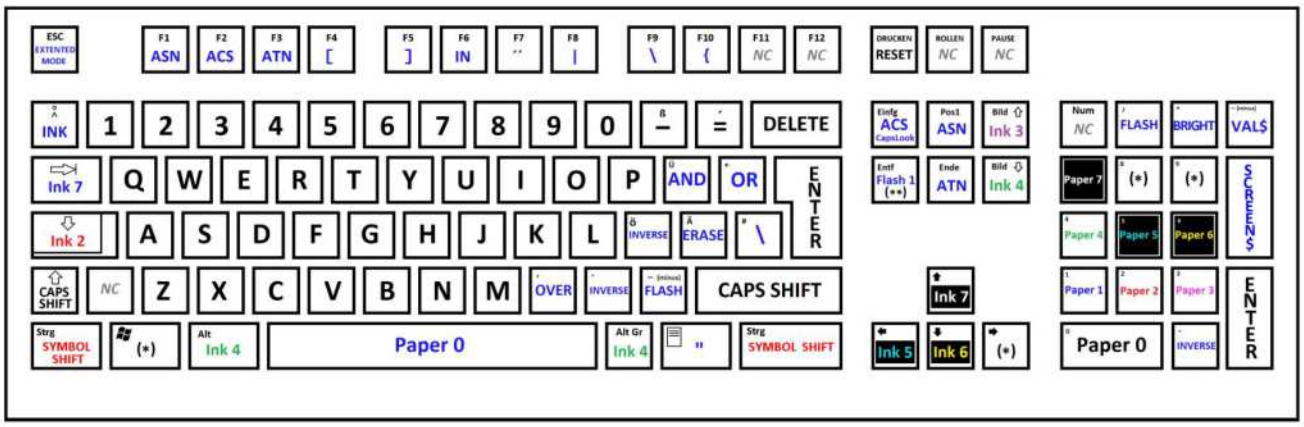
However, the interface works with certain restrictions on the SPECTRUM 48 and can replace a defective keyboard foil. Due to the construction of the PS2 keyboards, the SPECTRUM is also easy to use. For hobbyists who want something special and who have a spacious PS2 keyboard, the interface is the possibility to fit everything together in the mentioned case. There are certainly better PS2 interfaces for the SPECTRUM, but not for the price of almost 19€ at *Lotharek* and 24€ at SinTech. All other interfaces I know cost double to four times the price of the PENGUIN. So if you want a low-priced PS2 interface for the 48kB- SPECTRUM, which works well, even if with a few compromises, the PENGUIN is a very good choice.

Of course all prices are as always without guarantee.

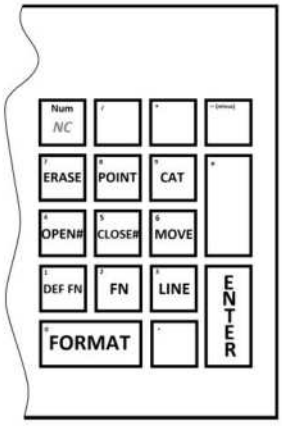
jg



Keyboard scheme First level and Symbol Shift



Keyboard scheme Extendet Mode



Keyboard scheme numeric keypad

BACK IN 1977

AVERAGE COST

A first class stamp	$0.13
A gallon of gas	$0.62
A dozen eggs	$0.82
A movie ticket	$2.34
A new house	$49,300.00

AVERAGE INCOME PER YEAR
$15,000

'70s SLANG

Psyche! - Just kidding
Far Out! - Cool
Dream On - Unrealistic
Right On! - In agreement
Can You Dig It? - Do you understand?

IN *Style...*

WOMEN
Polyester
Flared trousers
Platform shoes
Farrah Fawcett Flicks

MEN
V-neck velour shirts
Turtlenecks
Chest hair • Sideburns
Afros • Mullets

U.S. PRESIDENT
Jimmy Carter

World POPULATION
4.21 BILLION

IN THE NEWS...

Jimmy Carter is inaugurated as the 39th President of the United States.

The first Star Wars film, Star Wars: Episode IV - A New Hope, premieres on May 25th and filmgoers line up for hours to see it.

NAVSTAR Global Positioning System (GPS) is inaugurated by the U.S. Department of Defense.

Saturday Night Fever sparks the disco inferno and the popularity of movie soundtracks.

U.S. Medal of Freedom is awarded posthumously to Martin Luther King Jr.

ON THE RADIO...

Tonight's the Night - Rod Stewart
I Just Want to Be Your Everything - Andy Gibb
Best of My Love - The Emotions
Evergreen - Barbra Streisand
Angel in Your Arms - Hot

TECHNOLOGY

The first Apple II computers went on sale.

The first MRI Scanner is tested in Brooklyn.

The Atari 2600 gaming system was released.

The first commercial Concorde London to NYC.

NASA space shuttle makes its first test flight off the back of a jetliner.

IN THEATERS...

Star Wars: Episode IV A New Hope
Saturday Night Fever
Close Encounters of the Third Kind
Annie Hall
Slap Shot

ON *Television...*

Three's Company
Happy Days
Laverne & Shirley
Charlie's Angels
All in the Family

THE PHILIPS P2000T

BY JOACHIM GEUPEL

Another interesting computer from my collection is the ***P2000T*** from ***Phillips***. The ***P2000*** series was the first attempt of Philips to enter the home computer market. ***Philips*** did not intend to start small, but want-wanted to enter right away with a mature system. So in March 1980, the two versions ***P2000M*** and ***P2000T*** were introduced at the Hannover Fair, after a video game console called »***Philips Videopac G7000***« had been released in an attempt to compete with the Atari consoles.

The computer's widest distribution was in the Netherlands, so it is correspondingly rare, with accessories hard to find. The ***P2000*** was the only computer produced in Austria.

The CPU Heart in the ***P2000*** computers is a Z80, it beats at 2.5MHz. The RAM was a gigantic 16kB at that time and could be upgraded to 48 kB.

The P2000T has no built-in basic system. It must either be reloaded from a Tape or is available as a plug-in module. The basic of the plug-in module is in Dutch, all messages are output in Dutch. So it has certain advantages to be able to speak the Dutch language at least in the basics.

Start without Basic module. The "T" at the top of the screen indicates which version is on the table.

The most significant difference between the T-model and the M-model was the target group of users. The T version was intended for home use, while the M version was planned more for the office application market. The T-version could be connected to the TV or to an RGB monitor via the obligatory video modulator. The M version was given an 80-character card, through which a monochrome monitor can be connected. In my case, I connected the ***P2000T*** to a RGB-VGA converter, which worked without problems. The picture is accordingly better than that of the RF output. All screenshots are taken from a VGA monitor whose image comes from the ***P2000T*** via the RGB-VGA converter.

According to the target group, the two versions were equipped differently. The T-model, not to be confused with Ford's model of the same name, had a mini-cassette drive built in, which interestingly is managed like a floppy disk drive.

There were no plans to retrofit the computer with a floppy drive. After all, the cassette could store 120kB of data, which was a bit more than the microdrive cassettes on the ZX Spectrum. Above all, these cartridges were much more reliable than those of the Microdrive.

The ***P2000M***, on the other hand, was equipped with a combination of monitor and two integrated 5 1/4-inch floppy disk drives, so that this computer was also CPM-capable from a memory size of 64kB.

There is so much to note about the memory and its upgrade that different specifications are given here. The basic memory is specified either with 16kB or with 18kB, the memory expansion was either to 64kB or to 72kB. The same applies to the memory capacity of the mini-cassettes. Here the information differs between 42kB and 120kB. The capacity depends on the length of the tape and is most likely 48kB. Next to the cassette drive are two module slots, into which program modules with user programs such as ***Wordstar*** or ***Chess*** and/or interfaces such as a Centronics for print output or a full useable RS232 can be plugged in.

THE BASIC INTERPRETER

The computer itself has no built-in Basic interpreter. It has only a 4kB ROM, which contained the basic system for video output and access to the cassette or floppy drive, more like a BIOS. If one wanted to program, it was either necessary to reload the interpreter from Tape, or one invested money for a plug-in module, which makes the Basic interpreter available.

When starting without a Basic module, the computer automatically accesses the cassette drive when the tape cassette is inserted, and tries to load a program. Access to the cartridge drive is permanent and probably does not end until Armageddon has started or the computer is turned off. A cassette basic was delivered with the computer, which should then logically be in

Basic Interpreter as plug-in module

Start screen with Basic Interpreter module plugged in

the cassette drive. Alternatively, the already mentioned Basic module was offered, which could be plugged into one of the two module slots. The Basic module was available in two versions: a 16kB version with a simple Basic, and a 32kB version with an extended Basic. The designation "simple Basic" must be put into perspective here. The »small« Basic interpreter contains all necessary commands and is quite comfortable to use. It is definitely better than the one of the ***Commodore 64***. If I then imagine what possibilities the 32kB interpreter offers - I would not reject it! The second slot is for an interface, e.g. a Centronics port for connecting a printer.

The image from the computer can be output to a TV via an RF socket, as mentioned earlier. The video modulator provides an acceptable picture, and the text outputs are easy to read. The image can be output to a RGB-capable monitor via a RGB jack. A standard RGB signal is available at the video socket, so it is also possible to use a VGA monitor for image output via the familiar RGB-VGA converter.

For printer control, the computer has a RS232-compatible interface. It would be nice if this port was a fully compatible RS-232, but this only outputs data and cannot receive any - a pity really.

Another interesting thing is the dimensions of the ***P2000T***. The device is really big. The computer is the biggest computer in my collection. Its dimensions are W-D-H 41,5cm x 47cm x 11cm. Its weight is about 5kg.

All in all, the ***Philips P2000T*** is a solid machine, well suited to the needs of the early 80s. Programming with it is fun, even if the Dutch makes everything a bit difficult.

RESTORATION

The computer came in a package from Hermes. Hermes is not to be recommended for shipping such goods. I have had to repair damaged computer and monitor cases several times, because Hermes had, to put it kindly, been very robust with the packages. For example, the fasteners in the bottom part, through which the top part is connected to the bottom part, were both broken off. The breakages were seemingly new.

At first I could not turn on the computer. The power switch was defective. It just popped out again when I pressed it down. So I had to replace it. Fortunately, the dimensions of the opening in the upper part are such that a standard rocker switch fits in. Nice enough, the new power switch is also illuminated, so that a visual control, on or off, is possible.

Of course, the usual dirt was present in the computer, which I had to remove first. Unfortunately, the previous owner did not take too much care of the computer. The case is damaged on the right side.

When I started it up again for this article, I unfortunately found that access to the cassette is no longer possible without errors. I do not know what this is due to. The attempt to load or save programs is aborted with an error message.

CONCLUSION

As a conclusion I can say that the computer was at least somewhat ahead of its time. The font in the editor is displayed in different colors, depending on the command level. I have only seen this again in newer editors of other modern high level languages. Since the mini-cassette is managed similarly to a floppy disk or tape drive, saving and reloading programs is easy. This puts it ahead of other computers of its time, which still relied on the manageability of music cassettes.

All in all, the computer is fun. It is easy to use and clearly arranged. The only disadvantage is its sheer size, which takes up the entire table. In the early 80s, big was good. However, this does not dampen the pleasure of the computer.

Getting information about the Philips ***P2000T*** on the Internet is relatively difficult. Many of the links that can be found simply lead nowhere, and others haven't been updated in 20 years. One of the few really informative links, apart from the ones on my own website, is

https://almer.tigelaar.net/2020/07/the-magic-of-the-p2000t/.

The author, ALMER S. TIGELAAR, has really put some effort into it. Highly recommended.

That there is no inside view of the computer in this article may be forgiven. It was difficult enough to repair the computer and reassemble it after restoration, it was too much effort to disassemble it again for the article.

jg

NEXT BASIC PART 2

BY JOACHIM GEUPEL

Here is the second part to NEXT-Basic. I got help from two people. Christof Odenthal gave me a hand. He also contributed something to this article. Uwe Geiken helped me with the explanation of PROC xyz() TO f. Many thanks to both of them. Sometimes you can't do it without help, especially when time is short because of too many other appointments and tasks.

So, let's get on with it!

VARIABLE TYPES

The fact that integer numbers must be preceded by a "%" was already explained in issue 229. This again is important for binary and hexadecimal numbers.

Numbers can be represented as decimal, binary, and hexadecimal, with decimal being the standard. Binary numbers must be preceded by an "@", hexadecimal numbers need a preceding "$". Note that hex numbers and binary numbers are integers and need a preceding "%".

Example:

This example does not work:

```
10 PRINT $AA
20 PRINT @1111
```

The NEXT refuses to accept the line and acknowledges it with an error tone.

This example works:

```
10 PRINT %$AA
20 PRINT %@1111
```

LET

The declaration of variables in Spectrum 48/128-Basic is generally done with LET. This has changed in Next-Basic. The LET can simply be omitted. In most other Basic dialects, be it MSX, CPC, Atari or Acorn, this is the standard. The Next can now do the same.

Example:

instead of `10 LET a=1: LET a$= "abc"`

now `10 a=1: a$= "abc"`

LOCAL VARIABLE

In Next-Basic there are global variables and local variables. The distinction is relatively simple: local variables are only valid in the respective subroutine and global variables are valid in the entire program. This has the advantage that you don't have to consider existing variable names in subroutines, but also has the disadvantage that this can easily lead to confusion.

Example:

```
 10 a$="Hello WORLD!"
 20 PRINT a$
 30 PROC test()
 40 PRINT a$
 50 STOP
100 DEFPROC test()
110 LOCAL a$
120 a$="Hello universe"
130 PRINT a$
140 ENDPROC
```

In line 10, a global variable named a$ is defined. Surprisingly, the content is "Hello world". A label in the form GLOBAL is not necessary. All variables are first valid over the whole program, without the need of a declaration. Line 20 prints a$ before the subroutine test is called in line 30.

In line 110 a local variable is defined, which is also called a$. For this, the LOCAL command is prefixed to the variable name, i.e. LOCAL a$. This time, interestingly, the variable says "Hello Universe". Then a$ is output again. After the output, the subroutine is terminated and returns to the main program. Again a$ is output. The global a$ has not changed.

The screen should now say:

```
Hello WORLD!
Hello universe
Hello WORLD!
```

LOCAL accepts more than 256 variables, this can be regular numeric, integer, and string variables. There can be any number of LOCAL statements in a subroutine or procedure as long as there is enough memory.

MOD

The Next Basic contains the command MOD, as to be found in the Microsoft Basic for MSX computers and PCs, the GFA-Basic of the Atari ST and in general most Basic dialects. The ZX Spectrum did not have this MOD command. This has changed with the Next Basic.

So what does the command MOD do?

MOD returns the integer remainder of a division.

Example:

The number 23 is to be divided by 4. The integer remainder is to be returned as a variable.

```
10 a = %23 MOD 4
20 PRINT a
```

Alternatively:

```
10 %a = %23 MOD 4
20 PRINT %a
```

The result is 3

In SPECTRUM-Basic the effort is greater:

```
10 LET a=23
      REM the number 'a' to divide is '23'.
20 LET b=23/4
      REM '23' is divided by '4' and stored as 'b
30 LET b=INT b
      REM integer value of 'b' is formed
40 LET c=b*4
      REM  'b' is multiplied by '4' and stored as 'c
50 LET d=a-c
      REM 'c' is subtracted from the original number 'a
60 PRINT d
      REM the integer remainder is output as 'd'.
```

Again, the result is 3.

It is important that MOD only works with an integer number. The dividend must be preceded by a %. The number can then be returned either as an integer or as a floating point number.

DEFPROC / ENDPROC / PROC

Procedures are subroutines. With the ZX Spectrum Basic we were used to jump into subroutines with GO SUB or GO TO. The return after a GO SUB is done with RETURN and is continued exactly after the GO SUB. GO TO is used for branching in the program and is an absolute jump. If branching to a subprogram, the return jump must also be made with a GO TO. I will spare the reference to spaghetti code here.

Procedures are closely related to GO SUB. On the one hand it makes structured programming in Basic easier, on the other hand it is a bit more complicated to use than GO SUB. In addition, the application possibilities of DEFPROC / ENDPROC and PROC are much greater than those of GO SUB.

The main difference is that jumps in processes do not need line numbers but labels. This means that the subroutine is given a name. The length of this name is largely arbitrary, but it is advisable to choose a label that also has something to do with the program in the procedure - i.e. for a sort procedure "sort", for output to screen "output", etc.

The entry into a procedure is done with PROC procedure name(). The parenthesis after the procedure name is mandatory. If it is missing, the command is not accepted and Next emits an error tone.

PROC TEST()

With PROC test() the program branches into the subprogram with the name test. After the procedure is finished, it jumps back immediately behind the entry point from where the procedure was called.

Example:

```
 10 PRINT "Main program"
 20 PRINT "Jump to the procedures"
 30 PROC test1(): PROC test2():
    PROC test3()
 40 PRINT "Back from the
    procedures."
 50 PRINT "End of program"
 60 STOP
100 DEFPROC test1()
110 PRINT "This is procedure
    "test1""
120 ENDPROC
200 DEFPROC test2()
210 PRINT "This is procedure
    "test2""
220 ENDPROC
300 DEFPROC test3()
310 PRINT "This is procedure
    "test3""
320 ENDPROC
```

In line 30 the program jumps to the subroutines test1, test2 and test3 one after the other. The jumps are thus processed one after the other. However, the chaining of the commands is somewhat confusing. It would be better to place each of them in a separate program line. The procedures are located from line 100 onwards. These are independent of each other and are processed accordingly. The Stop command in line 60 is important in that the program run is ended here. If it is missing, the Next outputs the error message Direct command error,100:1. The procedures are not simply ignored, the Next runs on them, interprets them incorrectly and returns an error message.

PROC NAME(PARAMETER)

With PROC name(parameter) you can define subroutines, similar to GOSUB + RETURN, except that you don't need line numbers and can put parameters in and get return values.

Definition with:

```
DEFPROC name(parameter)
...
ENDPROC
```

or:

```
DEFPROC Name(p1,p2,p3)
...
ENDPROC
```

You can pass up to eight parameters with commas. The subroutine is then called like this:

```
PROC Name(123)
```

or:

```
PROC Name(x)
```

or:

```
PROC Name(1,2,3,4,5,6,7,8)
```

The return values work like this:

```
DEFPROC Name(x)
...
ENDPROC =123
```

or:

```
DEFPROC Name(x)
LOCAL m,n
...
ENDPROC =m,n,5
```

You can return up to eight values. And you call it like this:

```
PROC Name(5) TO result
```

or:

```
PROC Name(5) TO re-
sult1,result2,result3
```

PROC XYZ() TO F

The Keyword TO can be used to pass a result that was calculated in a procedure to a variable.

Example:

```
 10 CLS
 20 t=0
 30 PRINT "Variable before jump
    into procedure: t=";t
 40 PROC test() TO t
 50 PRINT
```

```
 60 PRINT "Variable after jump
    back", "from the procedure:
    T=";t
 70 STOP
100 DEFPROC test()
110 LOCAL xyz
120 xyz=234
130 ENDPROC=xyz
```

In line 20 we define the variable 't' and assign the value '0'. To ensure that there is a '0' in it, it is printed in line 30. Line 40 branches to the procedure named test. At the same time it is specified with "TO t", that the return value of an operation in the procedure is passed into the variable 't'. In the procedure "test", a variable named 'xyz' is created as a local variable, with the value 123, defined in line 120. The return occurs with ENDPROC, whereby the result of the operation, in this case 'xyz', is also passed. This value is passed to the variable 't' after the procedure is finished. Now instead of '0' the value '123' is in 't'.

Variable "t" before jumping into the procedure:

t=0

Variable "t" after the jump back from the procedure:

t=234

As Christof explained a little further above, up to eight parameters can be passed.

So, that's it for this time. More in the next issue.

Joachim

jg

SPECTRUM NEXT EMULATION INSTALLATION

STOLEN FROM THE INTERNET BY JOACHIM GEUPEL

It doesn't need to be mentioned again, that the SINCLAIR ZX SPECTRUM NEXT was a huge success on Kickstarter. Nor does the fact that the second edition broke the 1 million pound barrier within a few days - but I'll do it mention anyway.

Everyone who owns the machine knows that it's a fantastic computer, and everyone who supported the new campaign can look forward to a real jewel. If you didn't manage to get one, you can still experience the NEXT via emulation.

Here's how it works:

If you want to experience the SPECTRUM NEXT for yourself, there's an emulator that will let you do that. But as with all emulators, you can't "feel" the device, you can only see its capabilities.

#CSPECT is a very powerful emulator, but setting it up is not easy. If you follow these guidelines, your SPECTRUM NEXT emulator should run smoothly and you can enjoy some of the free games available.

First, you'll need to download a few things, which are listed at the top of the facing page.

STEP 1: GET THE FILES

Create a folder on your computer. It can be in any location and have any name, but for this example we will call it SpecNext.

Extract all the files and folders from the #Cspect zip file into this folder (see right).

Next, extract the SD card image into the same folder (SpecNext).

Now extract the oalinst.exe from the oalinst.zip file into the same folder.

STEP 2: INSTALL.

Run the oalinst.exe to install the required sound drivers.

Run the OFSmount.exe to install OFSmount.

Rename the SD card file to cspect.img.

You are now almost ready to use the emulator, but first we need some ROMs and

to create a small batch file to configure and start it.

STEP 3: THE ROMS

Before we can start the emulator, we need to copy two ROM files from the SD card image to the SpecNext folder, the other ROMs are not needed in this step.

Start OFSmount.

Select MOUNT NEW and select the file Cspect.img.

Click Next.

Select the partition and click Next.

Select Mount as removable media and uncheck Read Only.

Click Mount.

A new virtual drive should now be visible in Windows Explorer. You can view the contents as you would for a USB drive.

Copy the following two files to the SPECNEXT folder: enNextZX.rom and enNxtmmc.rom

Return to OFSmount. Select the virtual drive and click Dismount.

STEP 4: THE BATCH FILE

Now create a new text file called Cspect.bat in the SPECNEXT folder.

The name is not important, but for this example we will leave it as it is.

Edit this file and add the following line:

Cspect -nextrom -tv -mmc=cspect.img

Save the file.

You should now have a list of files like the one shown on the right.

STEP 5: STARTING THE EMULATOR

To start the Spectrum Next emulator, simply double click on the Cspect.bat file you created and you should see the Spectrum Next welcome screen.

#Cspect has numerous settings you can make in the batch file during the startup process, including speed, screen size, and joystick.

The -tv option I use disables scanlines and is my preferred way of using the emulator. All options can be found in the ReadMe.txt file in the SpecNext folder.

To explore the NEXT, press SPACE and then ENTER to load the file browser. Here you can view the contents of the SD card file and depending on which one you downloaded, you can play some games or view demos.

STEP 6: ADDING NEW GAMES

Now comes the hard part: adding new games to the SD card file.

First, download the game you want to play. This is usually done in a ZIP file. Unzip the contents to your hard drive. Usually, all games are stored in their own folder, keep this structure.

Mount the SD card image again using OFSmount as a removable disk.

Now drag the games folder into the GAMES/NEXT folder of the SD card image using Windows Explorer.

Disconnect the image and restart the emulator. The game should now be visible in the browser and can be selected and run.

By the way, the DOS window can simply be closed after starting the emulator. It has no effect on the start and execution of the program. The emulator window can be scaled as desired. After startup, it is the same size as the DOS window, so it makes sense to resize it to the necessary size to be able to work without a magnifying glass.

A small warning at the end: with ESC the emulator is terminated immediately and without further inquiry. The program that is in memory is then irretrievably lost.

unknown author, edited by jg

SPECNEXT
INSTRUCTIONS FIRMWARE UPDATE V002 (01.08.2021)
BY BERNHARD "LUZIE" LUTZ

I would like to describe here the update procedure for the firmware of the Spectrum Next. This update is important so that all users are on the same software level and so that the programs and commands work the same for all of them.

On the page:

`https://www.specnext.com/latestdistro/`

you will always find the current »stable« version of the "SYSTEM/NEXT".

This contains the following components: The core, the firmware and the NextZXOS. All these files are simply copied onto the SD card that is inserted into the NEXT.

The current »stable« version **SYS-TEM/NEXT V1.3.2** includes:

Core v. 3.01.05 - this is the "core" for the SPECNEXT machine

FIRMWARE 1.29B - loads the BootMenu resp. the different cores when booting the Next

NEXTZXOS 2.06H - this contains the NextBasic.

By the way:

At:

`http://www.zxspectrumnext.online/cspect/`

you can find ready SD card images of this current ***SYSTEM/NEXT*** in different sizes for the use under emulators like ***#CSPECT*** or ***ZESARUX***.

Now to the update description. Even if this is described in detail under:

`https://www.specnext.com/latestdistro/`

I will describe it again here in my words. And don't be afraid of the

update: The Next has an ***ANTIBRICK***- (AB-) function, with which the Next can be brought back to life even if the firmware flash failed. This goes forward with the software version, but also backward.

It is recommended not to have only one SD card for the Next, but to use a separate SD card for updating. And this SD card first get formatted with the free tool from:

`https://www.sdcard.org/downloads/formatter/`

(ATTENTION: When formatting, all data on the card will be deleted).

Then download the appropriate package from:

`https://www.specnext.com/latestdistro/download`

There are the following different packages:

First of all there are the "normal" and the ***"BOARD-BACKERS VERSIONS"***.

The difference: The first one is for the ***"CASED NEXT"***, that is the one in the case. The second one is for the ***"PLATINE ONLY VERSION"*** of the ***NEXT***. The former has the entry in config.ini that the mouse is attached to the PS/2 port of the board. The second, that the PS/2 port is configured for keyboard.

Then there are package versions which contain the sourceco-des. These source files will probably be needed by very few Next users. If you want to use as little space as possible on the SD card, and only need the bare essentials (i.e. without games etc.), then choose one of the "Lite"

versions of the ***"SYSTEM/NEXT"*** packages.

Unpack all files from the selected package onto the freshly formatted SD card. Or if you want to use an existing SD card without formatting it:

Unpack all files from the package and ***OVERWRITE*** files already on the SD card. SD card with the appropriate Windows, Linux or ***MACOS*** version "safely remove".

Insert the prepared SD card into the switched off Next. Switch on the Next. Normally a picture will appear at some point via the selected screen output. This

can also be forced by pressing the following keys: D for digital output ***(HDMI)***, ***V*** for ***VGA*** or ***R*** for ***RGB*** (requires special ***SCART*** cable). You then select the mode that seems best to you and press ***"ENTER"*** to save this mode to the SD card.

Now you should get a message that the core is too old and needs to be updated. Then press and hold the U key (maybe on another key if not using an English keyboard) and press Y (like Yes) to start the flashing. After flashing, you are told to disconnect all cables from the Next (power cable first and then importantly also the HDMI cable, since the Next may be powered by the screen). Then wait a few seconds, reconnect all cables (power cable last) and turn on the Next. That's it.

If you have any questions about this, feel free to contact me.

At:

https://gitlab.com/thesmog358/tbblue

you can find the ***"System/Next Official Distribution git repo"***, i.e. the official ***"non-stable"*** version. The download is called:

"tbblue-master.zip" and has currently about 45,7 MB size.

The change history can be found at:

https://gitlab.com/thesmog358/tbblue/-/commits/master

I recommend this version only for those who like to experiment and for comparison with the stable version!

Greetings

Bernhard »Luzie« Lutz

e-mail: Luzie67@gmx.de

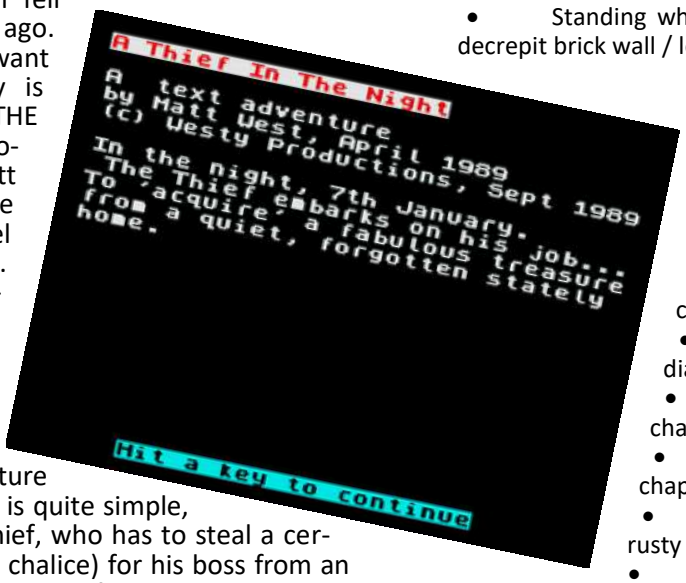
bl

A THIEF IN THE NIGHT

BY HARALD LACK

Hello dear adventure friends,

today I have chosen a relatively small, but quite interesting program, which fell into my hands some time ago. The adventure game we want to solve together today is called "A THIEF IN THE NIGHT" and was programmed in 1989 by Matt West and published in the same year under the label WESTY PRODUCTIONS. The adventure was developed with the help of the QUILL. That even small programs can have their charm becomes clear here.



What is this adventure about? Well, the scenario is quite simple, the player represents a thief, who has to steal a certain object (a communion chalice) for his boss from an old country estate in the night of January 6th to 7th. That this is not always so easy, you can understand with the help of the following adventure solution. But before we get closer to the step-by-step solution, let's first have a look at the attached map with its "only" 29 locations and the items to be found in them.

Let's go ...

- At the black iron gates of the driveway
- Outside the caretakers lodge
- In the caretakers lodge / old lady, ring
- At the back of the caretakers lodge / old tin bucket, saw
- On the way across the fields
- At the side of the manor outside some glass patio doors / piece of glass
- In the conservatory / fishing rod
- At the north-west corner of the manor
- At the back of the manor lurking in the shadow
- At the north-east corner of the manor house / long broom handle
- Standing very close to the forest
- Standing on a patch of uneven ground
- Standing next to a garden shed in the north of the allotments
- Standing where a rotting old fence meets a decrepit brick wall / leather-bound bible
- In the allotments
- Under an archway in the brick wall
- By the garden pond / old rusty tin can, small key
- Standing in a corner of a field by a fence
- In the graveyard of the chapel
- Standing outside the mediaeval chapel
- In the nave of the small chapel
- Standing at the altar of the chapel /vicar
- In the old garden shed / long rusty ladder
- Crouched down at the corner of the manor
- Standing outside the manor house in front of a huge oak door / smelly red fish
- Hiding in the shadows at the front of the building directly under an upstairs window
- At the top of the ladder looking into the safe room of Sunnyvale Manor / (barred) window
- In the safe room / (locked) safe, legendary Sunnyvale chalice
- On the driveway

So, that's all the locations and items we'll encounter on our quest. And so we continue now...

north, enter, examine caretaker, get ring, wear ring, exit, east, exam bucket, get saw, east, east, cut glass, enter, get rod, exit, north, east, east, east, south, south, east, get bible, west, south, west, west, fish, exam can, drop rod, get key, east, east, north, north, north, west, north, west, west, enter, east, exam vicar, give bible, west, exit, south, east, east, attach gum to broom, east, south, exam grate, put broom in grate, south, enter shed, drop jemmy, get ladder, exit, north, north, west, west, west, south, south, east, east, drop ladder, up, cut bars, enter, unlock safe, get chalice, lock safe, exit, down, west, south, west, meet boss.....Congratulations!!!

Again we have solved an adventure together successfully. I hope one or the other had fun with the admittedly relatively short solution.

hl

ADVENTURE CORNER

BY THOMAS EBERLE

Hello dear adventure friends and welcome again to this issue of Adventure Corner. Before I start with the programs, I would like to point out: The new flood of adventure programs is due to new tools that allow to create games in a modern way. Not every author uses these tools, some have their own methods or are using the classic tools.

The new tools:

Adventuron: **https://www.adventuron.io**

DAAD:

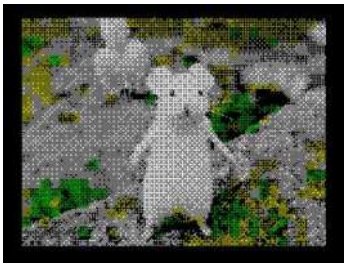
https://github.com/daad-adventure-writer/daad

Have a look at the websites. The games are created in a general format, then you can convert hem for the ZX-Spectrum.

But now we start with the best adventure games from 2020:

»LITTLE MOUSE ADVENTURE«

BY VLADISLAV BAUER



The first game we present today was created entirely by Vladislav Bauer in the classic way with the Spectrum tool "PAW" or "Professional Adventure Writer". This first work is an excellent introduction to the world of adventure games. The story is simple: as a mouse you have been caught and should get back home without being eaten. The description of the cage is clear, so are the locations at first. Dangers lurk in the cage, too; such a mouse is very vulnerable. It is easy to get into the story and find solutions with logic. There are no graphics and even the cover is not a very well digitized graphic. Keystrokes are accompanied by sounds and hints also come with short beeps. Otherwise, the adventure game only offers text with a few color-coded text passages. One can imagine that these are probably important...

For professionals certainly easy to solve, but just for adventure novices an interesting story and an entertaining fun.

Visit this website to download:

https://spectrumcomputing.co.uk/entry/35171/ZX-Spectrum/Little_Mouse_Adventure

»THE QUEEN'S FOOTSTEPS«

BY DAVIDE BUCCI

After the really great success with "Two days to the race" which was presented in the last issue, Davide Bucci has made a continuation in the following year. Of course Emilia Vittorini, the main protagonist from the first game, is back and this time she has to solve a museum theft.

Davide uses the AWS (Adventure Writing System) which can also output the source codes in "C", and from there the code can be compiled to various other systems, including the Speccy. So absolutely identical versions of the same game for different computers are created. This saves time, and the author had put this into his story and this has a positive effect to the new game.

The game reads like an interactive book, exciting and tricky at the same time. Davide describes the rooms in detail and rich in facets. A lot of information may not be relevant to the game, but that's what makes it so good, you don't know what exactly to look for.

The game is divided into four parts, you get the password for the next part when you have solved the previous one. Drawing a map for the locations is absolutely necessary in my opinion. Perfect for long winter evenings.

Download from:

https://spectrumcomputing.co.uk/entry/35236/ZX-Spectrum/The_Queens_Footsteps

»THE REVENGE OF MORIARTY«

BY GARETH PITCHFORD

Sherlock Holmes has one of his last cases here. Moriarty is now directly targeting our detective. Will Mr. Holmes be able to save himself this time as well? The adventure game does have atmosphere, but relatively few possibilities. The story is quite straightforward, you have to follow the path that Gareth Pitchford has thought up, otherwise you won't reach your goal. So it's a matter of examining every little thing and thinking about how to

use which part. It's not a very big adventure game, but still exciting and definitely worth a look. It was written with DAAD, which proves that great adventures are written with this tool.

Download from:

https://spectrumcomputing.co.uk/entry/36250/ZX-Spectrum/The_Revenge_of_Moriarty

»HUELLAS (FOOTSTEPS)«
BY FRAN KAPILLA

This game can be classified as an adventure game of a different kind. It is probably a story based on Christian Andersen, although it was unknown to me. In this game the player has to choose from several answers and thus influences the course of the story.

However, the adventure is not very long, the course of the story is not very varied and you quickly get out which option to choose. But it's a good idea and the whole thing is still accompanied with good monochrome graphics. You should play it.

Get it:

https://spectrumcomputing.co.uk/entry/35333/

»UNA LUZ EN LA NIEVE«
BY FRAN KAPILLA

If you like the "Huellas" game, you might as well get the sequel. It is a very famous fairy tale, again by Christian Andersen:

https://spectrumcomputing.co.uk/entry/35240/

»THE CURSE OF RABENSTEIN«
BY STEFAN VOGT

This adventure is already Stefan Vogt's second attempt into the world of text adventures. After the first success with the science fiction story "Hibernated" you are now transported to the 19th century to a creepy place, where things are not right. The game has a lot of atmosphere and you even get a bit creeped out. But the story is quite straightforward, you can try out everything without running out of time. Sooner or later you'll have tried everything and get one step closer to the solution. This is not necessarily a bad characteristic, but I still know, for example, from "Gremlins", that you are pursued again and again and must act fast. This would have also fit in here, for example that you should not stand too long at night at the cemetery...

The adventure also offers some graphics, at least in the upper area of the screen the place is shown with a small always the same graphic, which creates additional atmosphere. If you want, you can pay any amount when downloading, even nothing at all. Nice that there is so much software again from Germany, you should definitely try it. I think Stefan has proven in any case that he can do more than just science fiction.

Download:

https://8bitgames.itch.io/rabenstein/purchase

On the website there are also many other versions:

C64, Plus4, Spectrum Next, Amiga, Atari ST, DOS, Windows and the CPC version is together with the Spectrum +3 version in DSK format.

»LAST NIGHT IN THE OFFICE«
BY TIM JACOBS

This adventure created with DAAD takes us back to modern times. Unfortunately, we are about to lose our job. Therefore, we have locked ourselves in the company to find evidence of our innocence during the night. The adventure presents us with all sorts of tasks such as logging into the computer, finding key cards and opening doors. It is relatively easy to find your way around, as we all know it in our offices, where most desks have the same chaos.

It's more of a simple adventure game, but at least it's not a pure text adventure, each room is accompanied by some graphics. From a purely literary point of view I wouldn't rate it as high as the games by Davide Bucci or Stefan Vogt, but it's still exciting, the story resembles so some well known movies. If you don't like fantasy, medieval and sciene fiction, you might find your favorite adventure here. Download and have a look at:

https://spectrumcomputing.co.uk/entry/36141

»FROM OUT OF A DARK SKY - THE SECOND NIGHT«
BY JOHN WILSON

If someone can be called the master of adventure games, then it is probably John Wilson. It is very nice that he has given us some more games in the last years. A gift in the truest sense of the word, because even if John Wilson has earned his living for 30 years with the sale of adventure games, his last works are all freely available. So is this adventure game, which suggests to me that it's a sequel, but maybe I missed the first part in the crowd.

The game itself is, like all games by John Wilson, a pure text adventure. Linguistically it is rather demanding and even I had to look up some words, although I actually speak fluent English (probably not enough). Nevertheless, the atmosphere immediately grabbed me, you constantly think that something is happening, you get the hint of a rustling from the roof or from a corner and you already get nervous, although nothing will happen until the next keystroke.

The game seems to have a futuristic touch, there is talk of a protective shield. However, it's ultimately about solving puzzles, as always, regardless of the time. Once again, though, it shows how incredibly versatile John Wilson has made an adventure game out of each story. I can recommend any of them. You can download this adventure from:

https://spectrumcomputing.co.uk/entry/35691/

But I can also recommend any other adventure game by John Wilson, all of them are linguistically challenging, tricky and with a touch of humor.

Still published in 2020:

»ALIEN RESEARCH CENTRE 3«

https://spectrumcomputing.co.uk/entry/36390/ZX-Spectrum/Alien_Research_Centre_3

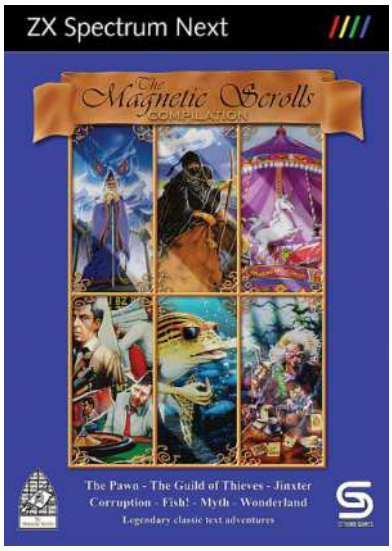
»BEHIND CLOSED DOORS« *THE PANDEMIC*

https://spectrumcomputing.co.uk/entry/35686/ZX-Spectrum/Behind_Closed_Doors_8-The_Pandemic

»BEHIND CLOSED DOORS« (METROCENTRE84)

https://spectrumcomputing.co.uk/entry/36506/ZX-Spectrum/Behind_Closed_Doors_9_Metrocentre84

The year 2020 also brought some adventure games for the NEXT, but these are mostly re-releases of the well-known adventure titles from Magnetic Scrolls.



Compared to the earlier SPECTRUM version, these versions contain graphics from the AMIGA version. As far as i know, the ZX-SPECTRUM versions were pure text adventures, only the +3 versions contained graphics which of course were not as good as those on the 16-bit systems.

Take a look at the Github Archive, I won't review the games here, but the adventures are highly recommended.

Download for the NEXT:

https://gitlab.com/strandgames/brahman/-/tree/master/zxnext_magnetic/games/compilation

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GAMES 2020
VON ELLVIS

Before we get to the 2020 games, there is a small addendum to 2019. I had packed some games into a second article, which caused confusion and so it got lost before printing. Hence the first four games from 2019 and then to 2020.

BRAIN 8 - © 2019 IVANBASIC

Brain 8 is a robot controlled by Spectrum. We can fully customize it's parts at the begining (well, by fully I really mean just a colour), define controlls and go out to the wilds for a mission. What we have to do is to collect 7 parts so the robot's brain will be completed. To find the parts we have to search 7 houses on 3 streets.

Once we enter a house, there are 2 more doors and we have always to go through these to find the part (doors are marked by coloured attribute chesboard). Although it is not a labyrinth, it is good to remember which direction next doors are as we will need to leave the house as fast as possible after we get the part. On our way around each house we will see shiny small things. We can or pick those up or wait a moment and they will disappear so we can move a bit. Both ways have disadvantages. Those things are random upgrades and downgrades. It can damage the control (so key for LEFT will go right, key for RIGHT will be action and ACTION will go left), it can damage part of our memory (64kB at the begining), but also it can partly recharge our batteries or give us a shield (so other things will not affect us) for a current house. If we decide to go slowly to avoid picking those things up, we risk that everything will take too long and we will run out of batteries.

Once we find the missing part, we have to keep moving. Each part is guarded and if we will stop for a moment, guardian will stole the part from us and we will have to leave the house and come back again to retrieve it again. Leaving the house will also repair damaged controll. Once we successfuly leave the house with a retrieved part, the doors will be shut so we know we've been inside already and can search another house. There is occasional lightning on the streets, if it will hit us, no damage is done, it just stop us for a moment.

The houses are the same every game, so if you're a bit confused, just play more games and you'll find that things are pretty straightforward. One exception is a Matrix house, once you pick up the missing part there, things will start moving and it is pretty confusing.

Brain 8 is not the most impressive game of the 2019, but what is pretty impresive is the fact that it is written in BASIC. We have big robot moving around the town, we have funny (mostly) error messages going on during the gameplay and still the game manage to be responsible and very playable. Just try it, you may be surprised what the actual BASIC can do!

Download for free at:

https://spectrumcomputing.co.uk/entry/34781/ZX-Spectrum/Brain_8

CHIP RESCUE - ©2019 ROMANCHA

In last decade we've got a tons of new platformers for the Spectrum. And they mostly look all the same. But there are still some that are different. Let's take a look on the first adventure of agent Buck retrieving 8 pieces of a chip from evil professor Reckless.

We start outside of a scientific complex. There is a car waiting for us once we collect the chip, we also see entrance and some robots. Once we move we can see that our hero is not any playboy, quite opposite. He is slow and of a bigger shape. But he can jump high and that's important.

Right at the beginning we can choose 2 different ways how to proceed. It is basically up on us which way to choose, we have to go through whole complex. But I personaly find the way up a little bit easier to start with. There are keys to be found to open doors (everything that can be collected jumps a little bit so it is hard to overlook it), there are few different types of robots and security guys will fire rockets at us. Also the environment itself is sometimes hostile so we will have to avoid dripping water and other things.

The graphics are nice, everything is very clear and cartoonish, the game look really good. The whole place look "alive" - there are moving fans on the walls, blowing vapour from the pipes and so on. There is some movement on every screen. The controls are good and game is not unfair although it's not too easy. We also get a nice AY tune during the game and the sounds are for beep.

Chip Rescue is really nice surprise in the vast fields of platformers and it is the game that should be at least tried as it is quite different in so many apsects. Go and give it a try!

Download for free at:

https://spectrumcomputing.co.uk/entry/34796/ZX-Spectrum/Chip_Rescue

GLUF - © 2019 RETROSOULS

Gluf is a clone of Painter. We have to go through all platforms to change their colour. When done, doors out will start flashing and we have to reach them to move to the next level. It sound a bit more simple then it actually is.

In this game, the Gluf is an electric frog. Instead of painting the platforms, we will charge them so they change it's colour. But to do that, we have to stop for a while on a batteries to charge ourselves. One charging is effective for 10 platforms which mean that we will have to re-charge few times per level. As always, we are not alone here. There are some nasties to block our way. Some fly, some slowly hang around the place (those can sometimes discharge a platform so we will have to charge it again to finish the level), some are running around the place fast and randomly.

Some platforms are for one time use only. Once used, they disappear. Pressing up or down on ordinary platform will move screen a bit so we can see if there are any enemies in our way. Solid blue background mean lifts that can be used for going up and down. We can also fall from any high, we just cannot fall off the screen. Luckily, we have infinite lives and game is not too difficult, so it is pretty much fun all the time.

Gluf is being made in multicolour, so we get another colourfull game. Everything move smoothly and controls are good, the game react very accuratelly. There are sounds and music for the AY, the game run on Speccy 128K only. It is a classic game with a twist and a good way to spend few minutes on your Spectrum.

Download for free at:

https://spectrumcomputing.co.uk/entry/34649/ZX-Spectrum/GLUF

SPACE MONSTERS MEET THE HARDY © 2019 MAYHEM & CONSCIENCE

There is another space monsters invasion in our way. They try to get over a

planet but they haven't counted with one thing, there is Hardy on vacations here and he don't like what is just happening. So, let's not waste any time and dive into this game.

Hardy is one of those people who don't talk much, but just go and do the things. You'll find this out very quickly as the game is fast. In fact, it is so fast that you have no time to enjoy the graphics which is pitty, it is really nice! It is done in multicolour, so it doesn't look much as just another action platformer. But not just movement is fast, there is also tight time limit. First level is simple, just collect the red card and move left to the teleporter. Simple enough and it take just few seconds to do. After finishing the level we get some statistics and can move on to the next one.

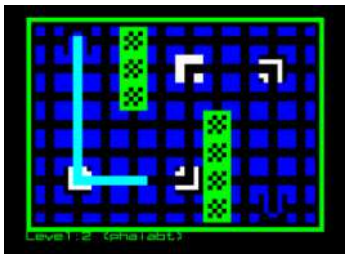
There is a panel at the bottom of the screen where we see number of our lives, time left for the level and our energy. Energy is important as there are some obstacles besides the monsters that can kill us, so it's good to keep an eye on it. Some platforms are blocking our way down, it's enough to just press down to move on. Also, it is not necessary to kill all the monsters in the level, important is to get the access card and then reach the teleport. Once we decide to kill a monster, we can use our gun or jump on the monster from above, both have the same effect. If we run out of time, we lose a life. Once we're out of lives, it's game over. There are no passwords or something, so we have to always start from the beginning. Later levels are bigger and bigger, so it start to be really hectic and every second lost may cost us a life. There is AY music and effects on 128K Speccies, 48K users will get only AY effects.

Space Monsters meet the Hardy is really nice little game that look good and also play good. Not much more to say, just join Hardy and smash some monsters!

Download for free at:

https://spectrumcomputing.co.uk/entry/35156/ZX-Spectrum/Space_Monsters_meet_THE_HARDY

LAFIX 2 - ©2019 SIMON M. FERRE



Lafix II is a logical game. And it look a little bit like a mix between Deflektor and Pipe-mania. It is also written in BASIC. Can that be any good? Well, I have to say yes, it is really worth a try.

After load we get info screen and any key will get us into the game. There is blue area with two pipes (those are transmitting and receiving laser tubes). We are controlling rounded cursor and the aim of the game is to place mirrors the way that the laser can reach the receiving tube. Some of the mirrors are fixed and cannot be moved, we also cannot rotate any of them, those mirrors that can be moved have to be placed as they are. There are places in later levels with solid black background, we cannot place any mirror there. Once we place all of them as we wish (ENTER will pick up and also place a mirror), pressing SPACE will shoot the laser. Once the laser reach the receiver, screen is replaced with another level and we move on. If there is something wrong and laser will not end up in the receiving tube, it will just disappear and we can fix the mirror layout as needed. Besides the mirrors, there are also walls and teleporters. Teleporters move the laser into other areas but keep it's direction. Also, the laser can cross itself as many times as needed. Down under the playing area is a number of level currently playing and it's password. Pressing P on the info screen let will us to type in a password so we don't have to always play from scratch.

Lafix II is a demake of the same game for Simbian. Although in BASIC, it look good and more importantly, it plays very well and is a good choice for logical game with simple rules.

Download at:

https://simonsnake.itch.io/lafix-ii

THE CURSE OF TRASMOZ
© 2019 VOLCANOBYTES

The town of Trasmoz is long gone. Now it's a place of ghosts and evil creatures. But legend has it that this cursed town can be released from the devils hands once someone free the wandering souls and light the night. Yes, you're the hero of this night.

The Curse of Trasmoz is a platformer. The aim of the game is to kill all the zombies on screen and light all the torches with freed souls you collected. Each level is just a single screen big so we will focus more on the strategy how to avoid enemies (not all of them can be killed or even reached) then on remembering the map of the game. Also, moving around each level work the way that if we fall down from the screen we will show up at the top and if we move out of screen on left, we will show up on the right side of the screen and so on. This helps both, reaching the platforms and also avoiding the enemies.

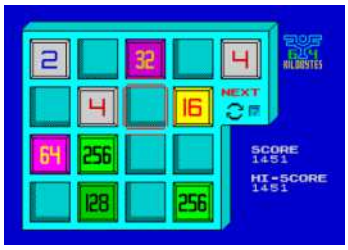
There are 4 different types of enemies. Zombies are slow and those are the ones we need to kill. Each of them will release a soul to be used for lighting a torch. Then there are bats. These are fast and we cannot kill them. Skeletons can be killed, but they throw bones around and are sometimes out of our reach. The last ones are witches, those fly around and we cannot kill them. As if there is not enough of obstacles already (I even haven't mentioned deadly spikes!) there is a time limit for each level. This makes the game a bit of hectic experience.

The graphics look nice and are colourfull and detailed. Controls are good, often we will need a good timing of jumps and the levels become very soon full of enemies. If we play on Speccy 128K we will also get a nice AY music during the game, sounds are for beep. Overall, The Curse of Trasmoz is a nice variation on platformers that is well worth of trying.

Download at:

https://volcanobytes.itch.io/the-curse-of-trasmoz

1024
©2020 SAVELY IVANKOV, UNDERTAKER



1024 is a simple logical game. We have to place random numbers (always powers of 2, so 2, 4, 8...512) on a grid of 4x4 cells. When same numbers are being placed next to each other, they add together and become one, freeing one cell.

If we place two 512s next to each other, they will disappear completely. The catch is, that we never get number 512 directly. If we get a number that we don't want to use, we can skip it. It takes couple of steps to get 1 skip point (we can have up to 9 of them), so It may sound a bit difficult, but once you start the game, the rules will come clear right away. The graphics are simple and clean, we also get AY music during the game that is a bit short so may be annoying after a while. The controls are responsible and the gameplay is very good. The game came took 11th place on Yandex retro game Battle 2020 and is great little game to have a few minutes play. As everything in Russian language, the controls are: O, P, Q, and A to move the cursor, M to place the number and B to skip a number if needed.

Download at:

https://rgb.yandex.ru/2020

ATOMICAT
©2020 ARIEL ENDARAUES

Time is not always just money, but sometimes also a life. Especially if you have to run through the city full of radiation to get a transmitter to call for a help. But because you are a cat, I am sure you will manage.

You start your quest in a bunker. It's safe here, but you cannot call for help. Important things to notice are the yellow walls and a big ventilator. The only way out is up and once you go there, the action starts. As a cat, you have 99 lives, but they go away very fast. The only possible thing to do is to run to the right, jumping over obstacles and avoiding the nasties. You can kill them by jumpong on their head, otherwise they take out some of your lives. And believe me, you don't want that.

Once in a couple of screens you will find the familiar yellow wall with a ventilator and a life recharger. You can rest there a bit as radiation will not reach you there. As you go deeper and deeper into the town, you will have to collect also keys and finaly the transmitter. Once you get one, you'll notice that way back is through the bunker itself and this part of the game is much easier. You don't have to run as there is no radioactivity, you just plan your jumps carefully.

AtomiCat is not a big game with many screens, it is also very frustrating. But something kept me there untill I've finished it. Playability is decent, graphics are good enough and the sounds are for beep. If you like platformers, you should give it a go!

Download at:

https://endaraues.itch.io/atomicat

BINARY LAND - ©2020 JOFLOF

If you play games regularly you may come to the point where playing just one character is not enough anymore. If this is your case, read on.

Gurin and Malon are two penguins lost in a world of mazes. They are soulmates in love so much, that they even move the same, just mirrored. And

it's you who should help them to go through all the obstacles and avoid enemies.

Each level is a one-screen maze. Both penguins are at the bottom of the screen, but they cannot reach each other unless going to very top. The maze is different on each side and that is first difficulty. You have to plan your moves so both of the penguins reach the top. Second obstacle are the enemies. First level contain a spider and few webs. When you walk to the web, you go stuck there. If it's the character you're not controlling directly, you have to go there and use a fire button to free the penguin. Fire button deal also with the spider itself, so you will be using it often. Once both penguins are at the very top, they have to meet right at the centre - to free the heart in a cage. As you get rid of the enemies, they do leave bonuses sometimes.

Some improve your score, some even make you untouchable for some time or give you an extra life. And once a while you get a bonus level, where you just pick up as much bonuses as possible. The game plays better then it look like at the first sight, but keep your eye on the timer as you have limited time for every level. The action is fast and furious.

Graphics are simple but clear and good looking, you're never lost trying to find what's going on and that add to the playability which is already really good. You will find yourself being able to complete first few levels in no time and eager to get more and more.

Binary Land is a nice little game that plays really well and the author went so far that he created even a version for 16kB Spectrums. The mazes are the same, but everything is small, using just UDG. But still, also that version is very playable and a lot of fun.

You can download the game at:

http://www.joflof.com/binary.html#binary

BLACK & WHITE
© 2020 GREENWEBSEVILLA (ANTONIO PÉREZ, JARLAXE)

The name of this game is a little bit misleading. You are collecting coloured diamonds within colourfull screens. And I have to say it took me

quite a while to get into the game. I was happy to see second level after a good 10 or more games. But then I got it - ignore the name and focus on the diamonds. Well, my mind is getting old...

You are a witch and all you have to do is to collect all the diamonds scattered around the screen. There are also some enemies, you cannot kill

them, but you can freeze them for a while (and walk over then). And here is the catch. Some places are blocked by big balls. Some are white and some are black. You can break the balls if they are the same colour as your witch and if you still have some magic. Your magic wand can be used just 3 times, after that you have to walk over a crystal (there are few of those in every screen) to recharge wand's energy. But once you do that, your witch will change colour so you can now break different ball. Sounds complicated? Now you see my long way into the game then!

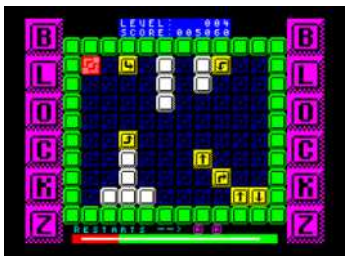
Once you get into the rules, you will find a very pleasant and nice looking game. Everything is so colourfull and smooth, the controls are good (it is even possible to play the game with just one hand), musics and sounds are very enjoyable and it is fun to play. To ease the play a bit you will get various bonuses that freeze all the enemies or give you additional time and so on. In no time I reached second world and soon after the third one. Old concept with a twist, but with also modern look.

The game is only for Speccy 128kB, but the overal look and presentation is sleek and you should give it a try. After finishing each world (which is every 8 levels), you get a password so you don't have to start always from the beginning. Good thing for a causal play.

Download at:

https://spectrumcomputing.co.uk/entry/35121/ZX-Spectrum/Black_and_White

BLOKZ - © 2020 RAYMOND RUSELL



I like puzzles. They are good for brain and also calm me down. But Blokz are different. It is stressing me because there is so little time for each level. But I won't give up too easily. The rules are simple. Each level contain few yellow boxes. Each of those have a mark on it to show which way it will move once we select it. What we have to do is to move the boxes so they end up next to one or more other boxes and thus will disappear. And we have to clean each level from all of them. Graphics are good and clear, controls work well (autorepeat a bit annoys me, but nothing too bad) and sounds are good. We also get a nice AY music in the main menu. Once we get a Game Over screen, we can continue the game from the last level we reached,

so even without passwords we can continue in the game. Blokz are nice little puzzle game that will make you a bit mad due to so little time. Go on and try it!

Download at:

https://raymierussell.itch.io/blockz

BONNIE AND CLYDE
© 2020 ZOSYA ENTERTAINMENT

Movies often let us think about past in a romantic way. Luckily, we have games that let us try those things ourselves. And I can say that the way of life of Bonnie and Clyde was more hectic, stressfull and annoying then any movie can show you. Bonnie is running around the roof. Once a while she drop some bonus, be it hanger (so Clyde will dress like others and won't be killed), box of ammunition, bag of gold or something else. Clyde is jumping around the screen collecting all the coins. But there are others and they have guns too. So Clyde have to shoot a lot and plan a bit how to get all the coins. Once he get them all, a safe will show up and Bonnie will drop a dynamite. Clyde have to get it and blow up the safe (but be carefull, the explosion can blow up everyone in its reach). When done, ladder to the roof will show up and that's the way to the next

level. Also, the time is ticking, so Clyde have to be fast.

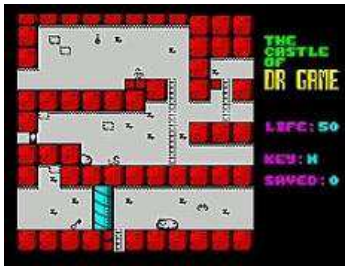
So we have a one-screen platformer. One special thing here is that Clyde is moving in 50Hz. That mean it cannot be any more smoother then it is. And it makes it really nice to play. Controls are accurate and fast, all the frantic action is still manageable and fun to play. Although the game may come a little bit repetitive after a while, it is using passwords for later levels, so the gameplay can be split between more sessions and you don't have to start always from the beginning.

Graphics are really nice. It is colourfull but still clear enough to see what is what. Backgrounds change and there are small details that make you smile (have you noticed the copyright message in main menu?). The sounds and music are all for Speccy 48kB but are good enough. Overall, this is a great game and highly recommended for all the gangsters around the Speccy!

Game can be downloaded at:

https://www.zosya.net/product/bonnie-and-clyde/

CASTLE OF DRGAME
© 2020 PAUL JENKINSON



If there is someone to look for when you want to play something interesting and good looking, Paul Jenkinson is always a good choice. Let's take a look on his latest creation.

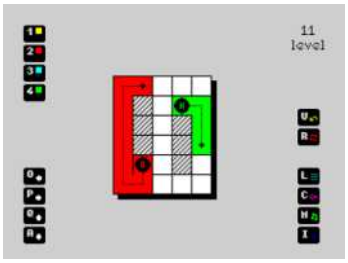
DrGame has stolen all the classic games and we're being sent to his castle to recover them. That sound a bit easier then is done. So, let's start. After taking a look around few rooms of the castle we will find a key and a locked doors. That look good, but the problem is, that there is no indication which key belong to which doors. Also, the castle is vast and we will have to walk a lot. Of course, there are some monsters, mostly snakes and bats that will reduce our life energy if touched. Luckily, they have own patters of movement, so we can plan our progress. Interesting thing in the castle are some rooms that look like classic games. We can find Space Invaders, Asteroids, Donkey Kong and many more. We have to find them all to rescue those games.

The game was created using AGD mini. Sprites are small, but everything move smoothly and it plays really good. The graphics are of usuall high standard that we know from Paul's games and it differ depending on part of the castle we are currently in. This help a lot with orientation and game is possible to finish without the map. Small touches as fireplaces make the game look a bit less static. The difficulty is high, but from the very beginning we are able to visit quite a few rooms so it is not too difficult to get into the game. Sounds are only few beeps for Speccy 48kB. I really recommend this game to all of you who like platform games.

Download at:

https://www.thespectrumshow.net/spectrum-games.html

COLORISTIC
© 2020 SINDIKAT (MARTIN BÓRIK, UB880D)



Once a while we get a game, that is close to be perfect. Not just by it's look, but also gameplay and overall execution. Coloristic is surely one of those. What we have here is a logic game. The rules are very simple. We get few squares on the screen, most are empty. At least one of them is coloured (with a number of how many squares it can actually colour). We have to use keys to move the coloured square so it create continuous snake and colour all other empty squares. In later levels we get more colours (up to 4 of them) and also some special squares. From bonus pieces (adding +1 piece to the colour snake), switches, little marks what colour can be use on particular square and so on. Overall, there is 80 levels waiting to be solved. First 10 or so of them are pretty simple so it's very easy to get into the game. Also, we get a code once we finish every level so we don't have to start from the beginning. No time limit, no restriction on how many undos or retries we use. It's a very calm game that let us think as much as we need.

The presentation is just beautifull. Graphics are very sleek and polished, everything is simple but shine with the right use of colours. All the keys to be used are on the screen together with a number of current level. There is a nice AY music playing, adding to the slow, calm feeling. Once you want to leave your hectic day behind you, this is a great game to play and relax with. And hey, it is still good for your brain!

Download at:

https://spectrumcomputing.co.uk/entry/35334/ZX-Spectrum/Coloristic

COSMIC PAYBACK
© 2020 PROSM SOFTWARE

Harvesting gold in space. On unknown planets. What can possibly go wrong? Well, not much in this case.

If you remember game Trailblazer, you'll be a bit familiar with this one. But instead of racing, you'll use your own pace to go through the levels. And I am sure you will go through a lot of them because this game look and play really great. So, where do we start? You are controlling a space probe, that is jumping on a surface of an alien planet. All you have to do is to collect pieces of gold, that is shining on the ground. But as always, there is a catch. The planet is hostile and there is just few places you can safely go, otherwise

your probe will be lost in deep sea of tar. From those places you can go, some are special. They can disappear once you jump on them (so you can use them just once), some are switches that change inaccessible ones to normal, some are teleports, some keep moving and so on. You'll find all during the gameplay. You see the planet as a 3d plane and I have to admit that it look just great. You're free to move in all 8 directions and everything is so smooth, fast and the gameplay is pure fun. The game is not really easy, I am stuck in fourth level, but still keep on trying as I want to see more. Luckily, there are passwords, so I don't have to start always from the beginning.

If you play on Speccy 128kB you'll get some nice AY musics, otherwise you get 48kB effects for beep. There are 2 modes of play, arcade keep your score and lives count, causal play goes without scoring and you have infinite lives. I am spending much more time with this game then I should and I am sure you'll do the same!

Download at:

https://spectrumcomputing.co.uk/entry/36518/ZX-Spectrum/Cosmic_Payback

That's all for now, but of course not everything from 2020. More in the next issue.

ellvis

COMMERCIAL SOFTWARE

BAT BOY
©2020 ANTONIO J. PÉREZ
BY ELLVIS

I am not a huge traveller, but once I've seen that a single ticket to Gotham City cost just 1,50$ I rushed to buy one. And you know what? I wasn't disappointed!

As a Batman, we have to fight against Joker's robotic army. They are everywhere, so we will have to visit few places in the city. This mean the

game contain 6 levels. From those 6 levels, four are platformers, 1 is about driving a Batmobile and 1 is about flying a Batwing. This add some variety to the game. But everything stick nicely together and it's really fun to play.

While platforming, Batman can throw Batarangs (2 at a time) to kill enemies. As the background is static, this is really about "shoot everything that move". But the main point is to reach end of the level to go to next one. There are usually 2 different ways within each level, the upper one and the lower one. They meet once a while and it is up to you which one to choose. If you go back to already visited screen (this shouldn't be needed anyway), enemies you killed are gone, which make the game a bit easier. Later levels add things like falling lustres, so the game gets more difficult. Once a while you come to the point that ordinary jump is too short. Once you jump and release the jump key, press it once again and Batman will start to glide. This way you can reach bigger distances.

First thing you will notice after the game load is Nintendo GameBoy screen. This game is based on Batman'89 for the GameBoy and it try to mimick it as much as it can. All is black&green and the levels, not really 100% copies, are close enough to the original. This add a bit of specialty to the game, it may look like an emulator for a moment. The graphics itself are small, but good enough. It also improve in later levels and the last level is the nicest one. Poorest are the 2 non-platform levels, but because the action, you wouldn't notice much. Overall, a nice looking game.

There are 2 versions of the game in the archive. Version for 48K Speccies use sounds for beeper, there is no music. Version for 128kB Speccies contain full AY sounds (and few musics too). Also, this version add small touches like little screens before the levels start, credits screen and so on.

They say that most important thing in a game is it's playability. And I have to say this is so accurate for this game. The controls are very good, main character react imediately for key presses and it all plays really good. Although I would call this game a "poor man's Batman the Movie", I highly recommend this one to all fans of the Batman. You cannot do wrong by playing this game!

Buy the game at:

https://greenwebsevilla.itch.io/bat-boy

ellvis

DEMOS 2021

BY ELLVIS

It is end of 2021 and that's the good time to take a look back how the things went in the waters of demoscene. At a first sight, the trend of tinny intros started last year is still around, but demos were not left behind.

Withou much more words, let's start.

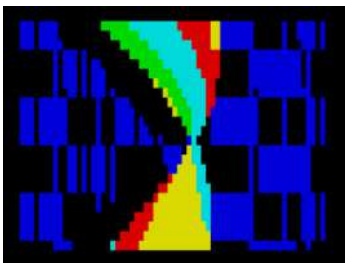
VOID - *INVADERS*

January is a month of DiHalt party. And this year it was dominated by one very special demo. Void is a space opera. It tells story of a first contact in deep universe. It is slow paced movie that grab you out of your chair and throw you into the middle of the story. The main parts are excellent 3D scenes made using Omega's rotoid engine. If you'll feel like it is a bit familiar to you then you're right, Omega took inspiration from Pete Cook's games Tau Ceti and Academy. Lamer Pinky's soundtrack is made specially for this demo and everything just fits together perfectly. If you want to be taken away for a couple of minutes, watch this demo, it is just one of it's kind on the Speccy (Speccy 128kB to be more precise and if you want to read more technical details and the story, there is long info file attached in the archive).

Download at:

https://drive.google.com/uc?export=download&id=1-VNLRvqyoY4WkprTINmOaQ2yrykMuDbr

BORED - *SIBCREW*

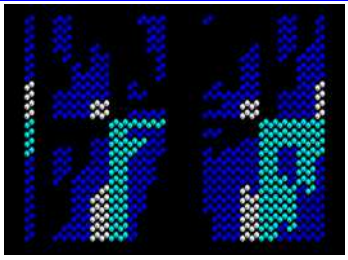


From Siberia with love. Or maybe not this time. Second place on DiHalt 2021 in January, sibCrew rant about the silence on the demoscene. And they do it in their usuall style, with lot of colours and a good music. (demo run on Speccy 128kB)

Download at:

https://files.scene.org/view/parties/2021/dihalt21/lowend_demo/bored.zip

SUPERFORM - *MARQUEE DESIGN*

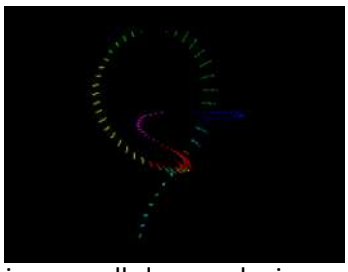


This is another tiny intro from Superogue, who came to the Speccy scene just last year. It is 256 bytes of nice patterns with good choice of colours. The only downside of this intro is it's precalc - it take 3 minutes to start as it is generating the pattern tables (intro run also on plain 48kB Speccy).

Download at:

https://marquee.revival-studios.com/releases/marqueedesign_superform.zip

GLEEST - *BFOX*



Another tiny intro. This one started life back in 2002 as a 512B intro, but now we get optimized version. Length is now just 256 bytes but also with added colours and even music. It is very smooth and relaxing, a well-deserved winner of the 256B intro competition at DiHalt 2021! (Intro run on Speccy 128kB)

Download at:

https://bfox.retroscene.org/files/gleest_256.zip

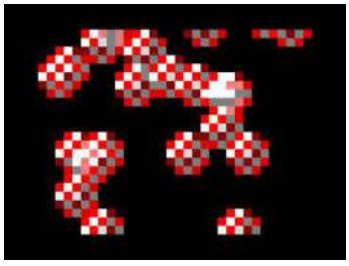
LOVEBYTE'2021 INV!TATOPN - *BFOX*

And another 256B intro by bfox. This time it is an invitation to a new party - LoveByte. It is online demoparty focusing on tinny intros for various platforms. So, a 256B intro as an invitation is a proper thing. Intro run on 48kB Speccies, but for a proper multicolour effect you need a second videoram (so, 128kB Speccy).

Download at:

https://bfox.retroscene.org/files/lovebyte.zip

BLIT22 - *ERRORSOFT*



This is second place of 256B competition held on Chaos Constructions during the February of 2021. What we get are 22 amiga balls falling down the screen. Intro run on plain 48kB Speccy and if you're annoyed by the sound, the archive contain also no-sound version. So, who need the Amiga really?

Download at:

http://ftp.cc.org.ru/2021winter/oldskool_tiny_intro/blit22.zip

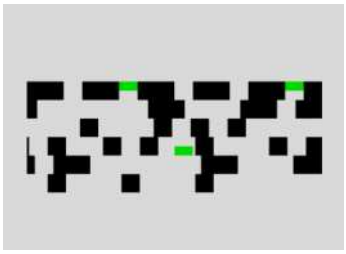
SUBLIMINAL EXTACY #4 - PAPAYA DEZIGN

There is never enough of disk mags. Subliminal Extacy is an old legend started back in the '90s by Extacy-3. First 2 issues were a nice bunch of silly articles from the UK, but issue #3 was huge with a lot of articler from around the world and the demoscene. And then everything ended. Untill this year's March, when the issue #4 was finally released. It's 20 years old content will make you smile and sometimes even to knock on your forehead. There are rumors about having new issues much more often, so let's see. And have a read from the past meanwhile. (You need Speccy 128kB to run the magazine)

Download at:

http://esxdos.org/se/subxtc%234.zip

METAPHORICAL FROG - HOOY PROGRAM

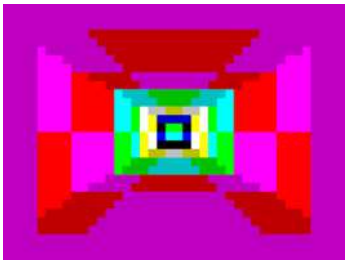


Well, another 256B intro, but this time also game. This is how it look like when a demomaker do a game instead. No space to waste, one quater of a kilobyte is enough. Go and play this clone of a Frogger. Can you save at least 5 little green Frogs?

Download at:

https://files.zxdemo.org/gasman/speccy/gasman_-_metaphorical_frog.zip

CHUNK - JOKER

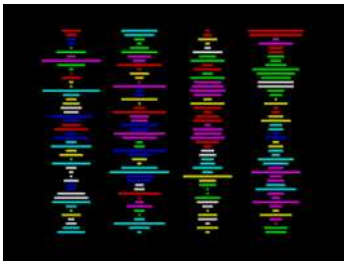


LoveByte party had a lot of contributions for our Speccy. One of people specializing on tinny intros is Dalthon from Joker and here is his attribute tunnel in 128B. Yes, the sound is a bit annoying, but the whole intro take less space then this text I wrote about it! (intro took 6th place at LoveByte 2021 oldschool 128B intro competition)

Download at:

https://files.scene.org/get/parties/2021/lovebyte21/low_end_128_byte_intro/chunk.zip

IN MOTION - JOKER



And one more intro by Joker. This time 256 bytes long. colourfull and smooth. Simple idea, simple execution, worth to look at. (intro took 12th place at LoveByte 2021 oldschool 256B intro competition)

Download at:

https://files.scene.org/view/parties/2021/lovebyte21/low_end_256_byte_intro/joker--in-motion.zip

DELIGHTFUL ATTRIBUTES
DARKLITE & OFFENCE

Well, here is again something special. A firstie from incommers, 2 famous groups from C64 joined forces together to try something on the Speccy. And the results are really delightfull! 4096 bytes of nice effects synchronized to the music. Everything is very smooth and colourful, it is a joy to watch. (intro took 2nd place in oldschool intro on Revision 2021 and need 128kB Speccy to run)

Download at:

https://darkside.no/zx/darklite_and_offence-delightful_attributes_final.zip

INFO GUIDE #12 - CONSCIENCE

And here it is, another diskmag. This time heavyly loaded with technical articles and with some demonstrations on the disk (like a whole 3D engine). There are separate versions in Russian and English and it is interesting peek into the news on the eastern scene. This is not for everybody, but I couldn't omit this one as it is part of the scene for so long already.

Download at:

http://alonecoder.nedopc.com/zx/books/IG13.zip

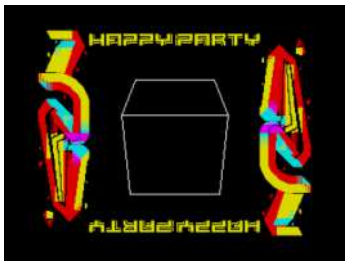
CCGO - ERRORSOFT

In may we've got an invitation intro for the summer edition of Chaos Constructions. It is a demo with nice attribute effects and scrolltext informing about the party. There is very good music, why not to check it out after all those tinny intros? (demo need 128kB Speccy and took 6th place in Outline 2021's combined oldschool demo/intro competition)

Download at:

https://chaosconstructions.ru/media/attachments/2021/05/1621115997_ccgofinal.zip

HAPPY PARTY DEMO - LZW

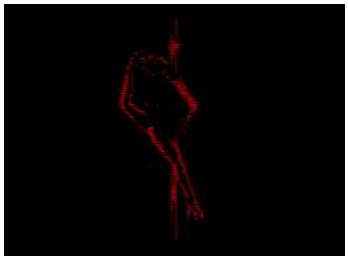


This was a bit unexpected. I am not sure what "Happy Party" really is, but the demo is worth to check. If for nothing else then for nice fast 3D routine. Although the music is not any special, the demo remind me the scene production from the early 2000's. (demo need Speccy 128kB to run).

Download at:

https://github.com/wermipls/lzw-hptdemo/raw/main/build/output.tap

INVOOC - DEMARCHE



Well, there are parties and parties. And then there are adult parties. One of those is Out of Compo which is (mostly) about nude graphics for Speccy. And here we have an invitation for the party. I would mark this one as Not Safe for Work. But it is also heavily blinking as it use Gigascreen for effects so be warned. Otherwise it is demo with nice effects and a good music. deMarche keep their usual standard here. (demo need Pentagon for proper timing).

Download at:

https://files.scene.org/get/parties/2021/out_of_compo21/info/invooc_by_demarche.zip

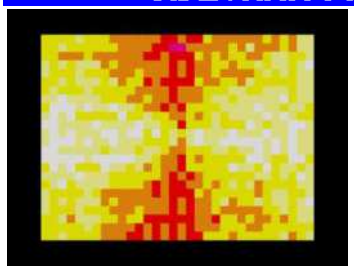
LIBUSE - NOBY & TDM

We all have some favourite singers and actors. And this slideshow is a homage for Libuse Safrankova, who died this year. Just few pictures and a music, but it brings a lot of memories for people who know her movies.

Download at:

http://noblnoch.net/download/dema/other/libuse.tap

VIDEORAM FILLER - BUSY



There was a joke about tinny intros, that all they do is just some way to fill a screen. Busy took this idea and did an intro about it. But I have to say that his 256 bytes are just wonderfull and I can watch this intro for ages. (intro need at least Speccy48kB to run and took 1st place on Lost Party 2021 in zx256 intro competition).

Download at:

https://busy.speccy.cz/download/vifi256x1.rar

G4G40 - CI5 THE AMATERS

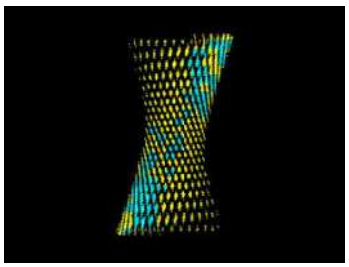
Gasman is a kind of celebrity on the Speccy scene (and far beyond!) so it cannot surprise us that once he is 40 years old, world will know it. This is a small demo celebrating his birthday. All the best Gasman!

(demo run on Speccy 48kB)

Download at:

https://www.noblnoch.net/download/dema/ci5/G4G40.tap

DEVOLVER - STARDUST

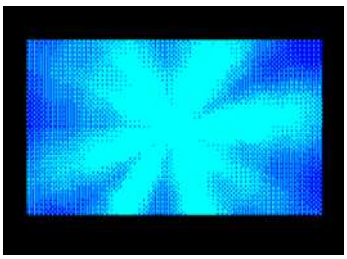


Stardust is a kind of new group on the scene. The people behind it are old wolfs of the scene, it was just time to come together with something fresh. And so devolver was released. You'll notice some similarities with the super era, but most important is that we have another competent demo that will last some time. Grab it and watch right now! (demo work on Speccy 128kB and took 1st place in oldschool democompetition on Chaos Constructions 2021).

Download at:

https://bay6.retroscene.org/files/cc21/devolver_partyversion.zip

GOA 3000
SERZHSOFT & EXTREME ENTERTAINMENT

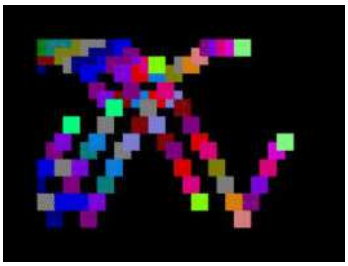


One of the competitions at Chaos Constructions 2021 was gravedigger. And first place was taken by Serzhsoft for this miracle. GOA is a legendary 4kB intro from 1998 that was working correctly only on Pentagon. Now we get a version that not only work correctly on a Speccy 48kB, but was also shortened from 4kB to 3kB. This is just a pure magic!

Download at:

https://bay6.retroscene.org/files/cc21/goa_3000.zip

JUMP!256 - SPECCY.PL



Another 256bytes intro, another tinny thing to look at. This time jumping squares. It is very smooth and even the sound is not really bad this time. Simple idea that look good. (intro work on at least Speccy 48kB)

Download at:

https://speccy.pl/archive/prod.php?id=582

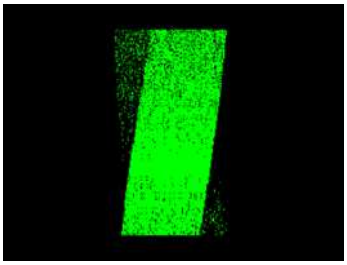
DUSHEVNOE - REALTIME DEMOSQUAD

How to make a party-report directly on the party? Well, few screens, a music and some old, good looking effect. And that is what this demo is about. It took 2nd place on Chaos Constructions 2021 and regarding the group name, we can guess that everything was done on the party. Good job! (demo run on Speccy128kB but music is a slightly slowing down, Pentagon is needed for full satisfaction)

Download at:

https://bay6.retroscene.org/files/cc21/dushevnoe.zip

TWISTERIZATION
GLOBAL CORPORATION & PHOSPHENE

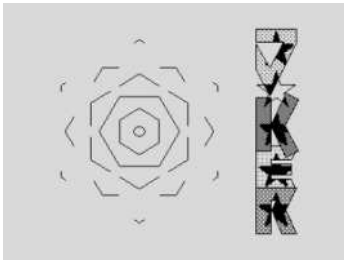


512 bytes seems quite a lot after all those great tinny intros. But still, let's take a look on this one. Twisters are pretty common in the demos and intros these days, but one more example of this effect won't hurt. It run fine even on Speccy 48kB and if you don't want to use trdos image, it is enough to load binary to address 25088 DEC and run it from there. (intro took 1st place in oldschool intro competition at Chaos Constructions 2021)

Download at:

https://forum.tslabs.info/download/file.php?id=2266

DALTHONIZM - JOKER

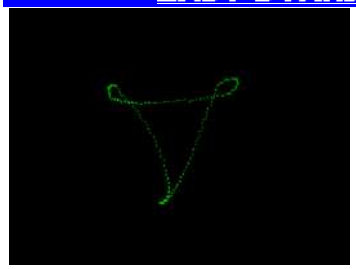


Well, another intro. But this is something special. 16kB look like a huge amount and in this case it really is. It sounds and look like a proper demo and is one of the few highlights of this year. Initial pre-calc take a bit less then 90 seconds, but the wait is really worth of it. This one is a must see! (intro need Speccy 128kB to run and it took 1st place in odlschool demo competition at Xenium 2021. one hint: don't be fooled by it's reset!)

Download at:

https://ftp.klosz.art.pl/scene/parties/poland/xenium2021/demo_oldschool/Dalthonizm.zip

LAST STAND - GOBLINISH



I am not sure what to think about this demo. G0blinish is active a lot around various scenes, but he stated that this is his last demo and he is leaving the demoscene after 10 active years. On the other hand, info file to this demo says that the demo is a joke. Well, be it one thing or another, it's a demo and you should go, download and watch it even if it's not anything special. Demos are a bit scarce last two years! (demo run on Speccy 128kB)

Download at:

http://g0blinish.ucoz.ru/demo3/ds21/lasts.zip

REVOLVED - STARDUST

Another Stardust release this year. This time dirty party-version, but still good looking and fresh. Although a bit of animations, it is well worth of watching, especialy with the music volume up. (demo work on Speccy 128kB and took 2nd place in oldschool competition on Demodulation 2021)

Download at:

https://bbb.retroscene.org/demos/211129/stardust-revolved-partyversion.zip

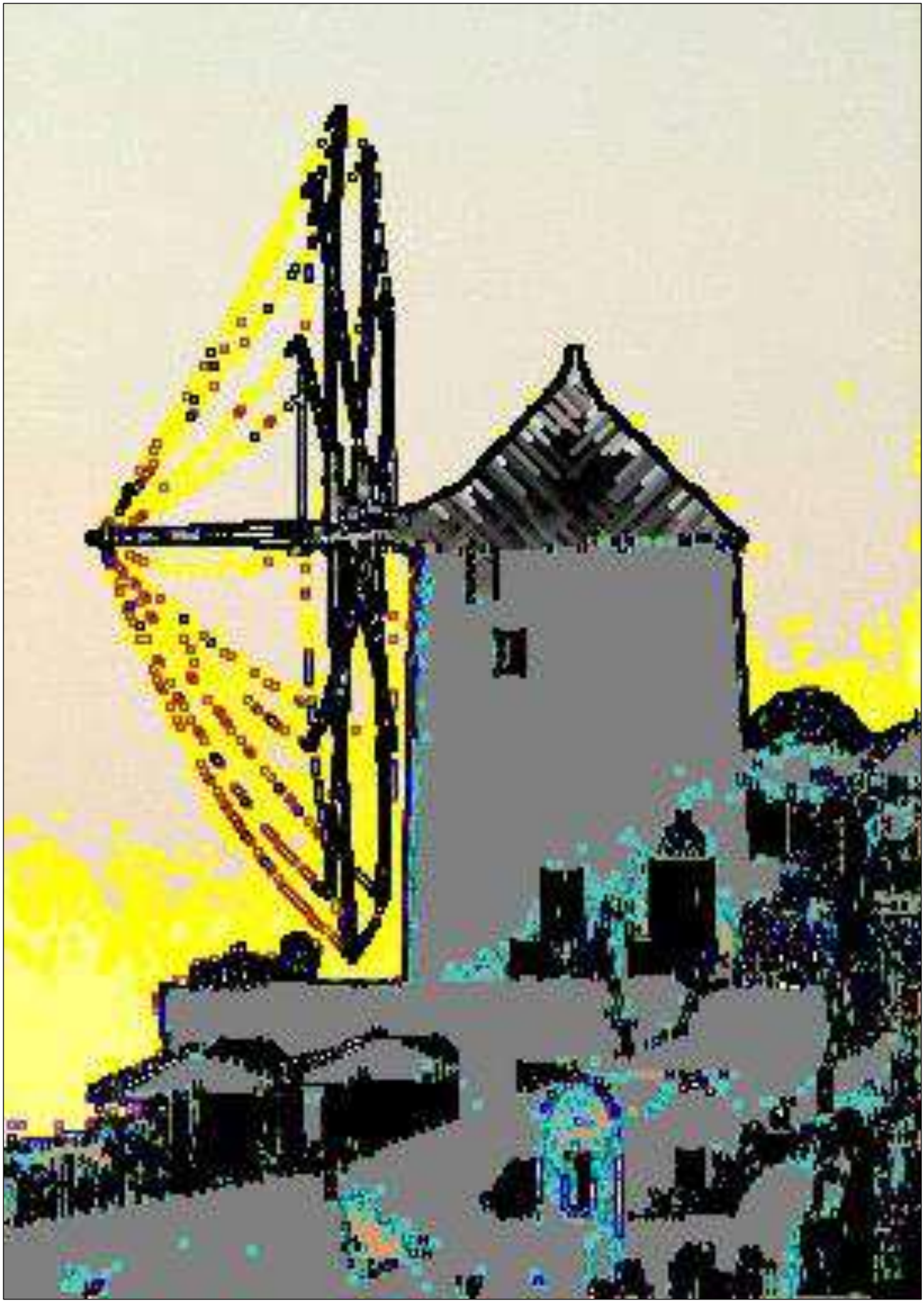
CELTIC PEANO - KASZI75

At the very end let's see something different. This is another newcommer to the Speccy scene and here we have pure Speccy 48kB demo. Right, beep music and some simple effects. It is distributed as a SNA file, just RUN it after load. (demo took 4th place in combined demo competition at Experience 2021)

Download at:

https://files.scene.org/view/parties/2021/experience21/demo/celticpeanobykaszi75.zip

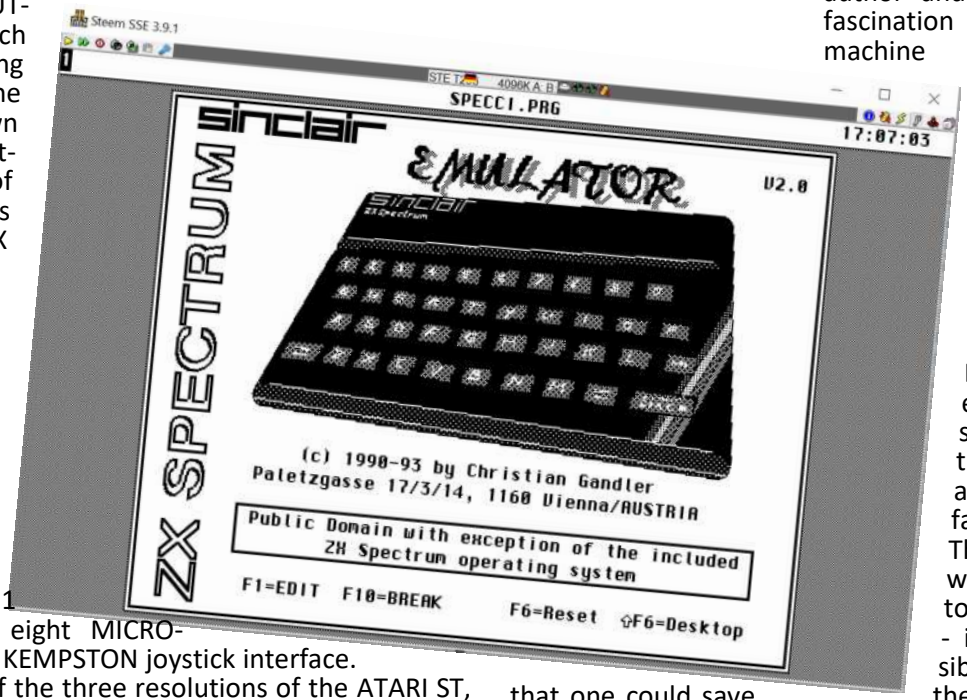
te



ZX SPECTRUM ON THE ATARI ST

BY JOACHIM GEUPEL

I am the proud owner of several ATARI ST in different stages of development as well as a regular user of the ATARI ST emulator STEEM SSE 3.91. As a former member and public domain administrator of the computer club IAT REUTLINGEN, of which I was a founding member in the 1980s, I still own a lot of PD software. On one of the floppy disks there is a ZX SPECTRUM EMULATOR programmed between 1990 and 1993 by the Austrian CHRISTIAN GRANDLER.



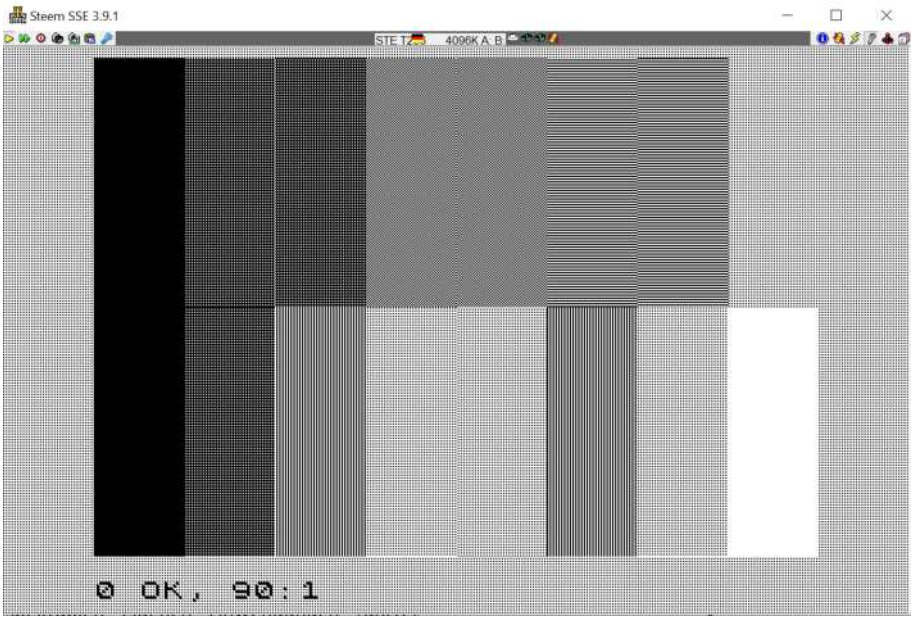
The program emulates a ZX SPECTRUM 48, INTERFACE 1 and 2, up to eight MICRODRIVES and the KEMPSTON joystick interface. It runs in two of the three resolutions of the ATARI ST, the monochrome resolution of 640 x 400 pixels and the lowest color resolution of 320 x 200 pixels with 16 colors. The speed of emulation with an unmodified Atari is slightly more than 60% of the speed of the original ZX SPECTRUM. An ATARI ST clocked at 16 MHz and with a cache memory does not quite reach the speed of the SPECTRUM.

To realize a SPECTRUM emulator on an ATARI ST was a real challenge for the author. The ATARI ST has a 16-bit bus and is clocked with 8MHz. However, the 68000 processor is very different from the Z80 in its structure and programming. So it must have been a real challenge to implement a Z80 processor on a 68000 processor and make it work. In the emulator documentation CHRISTIAN GRANDLER tells quite entainingly how he got the idea to program an emulator and what kind of difficulties he encountered. In fact, Mr. GRANDLER comes from the Sinclair world and got acquainted with the ZX81 in London, which, like many of us, was replaced by a Spectrum. In fact, I have not come across any program that does not run on the emulator. So it is largely bug free.

Here is an excerpt from the documentation:

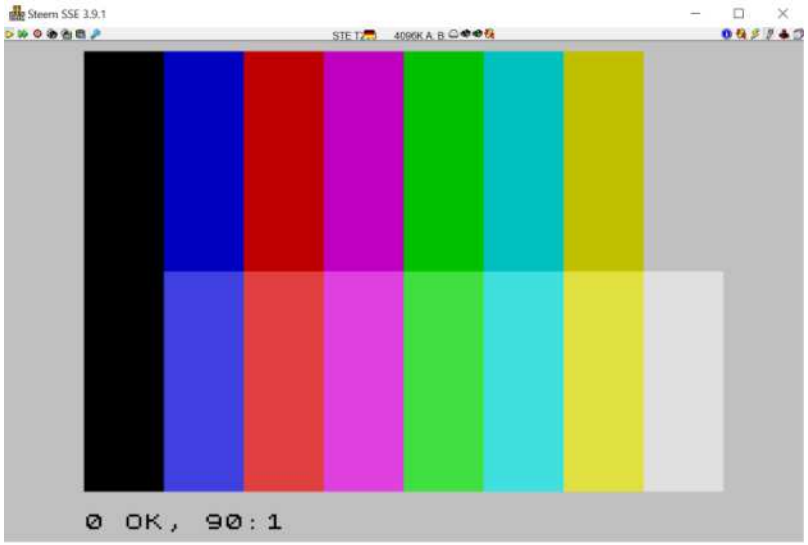
"(...) The spirit of programming had gripped the poor author and he was full of fascination for the magic machine language Z80. When there were rumors about a successor called "ZX SPECTRUM", he owned it immediately. Fantastic features awaited the author: opulent BASIC interpreter, 16 colors and sound generation, 48 KB Ram and four times as fast as the ZX81! The tape interface was - in contrast to its predecessor - impressively feasible and fast, so the trouble of saving that one could save.

And best of all: a real graphics mode with 256x192 pixel resolution for "real-live" pictures... The reader will notice: these statements are meant somewhat ironically with respect to today's computer power; but at that time the ZX SPECTRUM was a true manifestation of programming power for the author. Soon, good development software (editor, assembler) was available, so that exploration of the depths of the Z80 machine language could continue, leading to some respectable applications of our own. In 1985 the SPECTRUM had to be retired in favor of the ATARI ST, but the "first love" always remained in the author's memory. So it was not surprising when the thought came up to revive the old friend on the new computer. The first attempts to do so failed in 1987 because of the lack of knowledge about the ST (...).



Then followed the long, stony way, which had to be overcome on the trail of curious-spectacular total crashes and puzzling neurotic behavior of the ZX-ATARI or ATARI-SPECTRUM. (...)"

It was not easy



getting used to the monochrome resolution on the ST, but the colored LowRes resolution gives a SPECTRUM feeling, and on the ST emulator on a reasonably good monitor the color display is as good as the SPECTRUM with the VGA JOY Interface.

The operation takes some time getting used to. The key mapping corresponds to that of the Spectrum, but a few difficulties arise when the emulator runs in an emulator and the keyboard mapping of the PC keyboard only approximates that of the ATARI ST. So it caused me some problems to use SYMBOL SHIFT and EXTENDED MODE consequently, because on all ZXS emulators I know, e.g. SYMBOL SHIFT is on the shift key and not on ALT. Likewise, the path settings for loading and saving snapshots have to be entered manually in the setup instead of being determined and passed by the BIOS. However, a file browser is available, which makes loading programs easier. To save programs, the correct path must be entered in the setup. The emulator processes SNA files. These can be loaded directly via the file browser, which is operated via the arrow keys on the keyboard.

The emulator is not a standalone program. It includes a modular program package with some auxiliary programs. The keyword can be defined, the setup can be used to customize sequences, the character set the emulator works with can be switched by means of a program, and some more.

Of course, where there is light, there is also shadow. Both my emulator and most of my ST computers run TOS 2.06. This TOS was developed for the STe computers and is no longer completely compatible with the previous versions. It may happen that the ATARI ST generates an error message which appears randomly. This error message can actually be clicked away and has no further effect on both the ATARI ST and the Spectrum emulator.

The emulator comes with a shell from which not only the emulator but also all utilities can be started. It is recommended to start the emulator from the shell. It has the name SPSHELL.PRG.

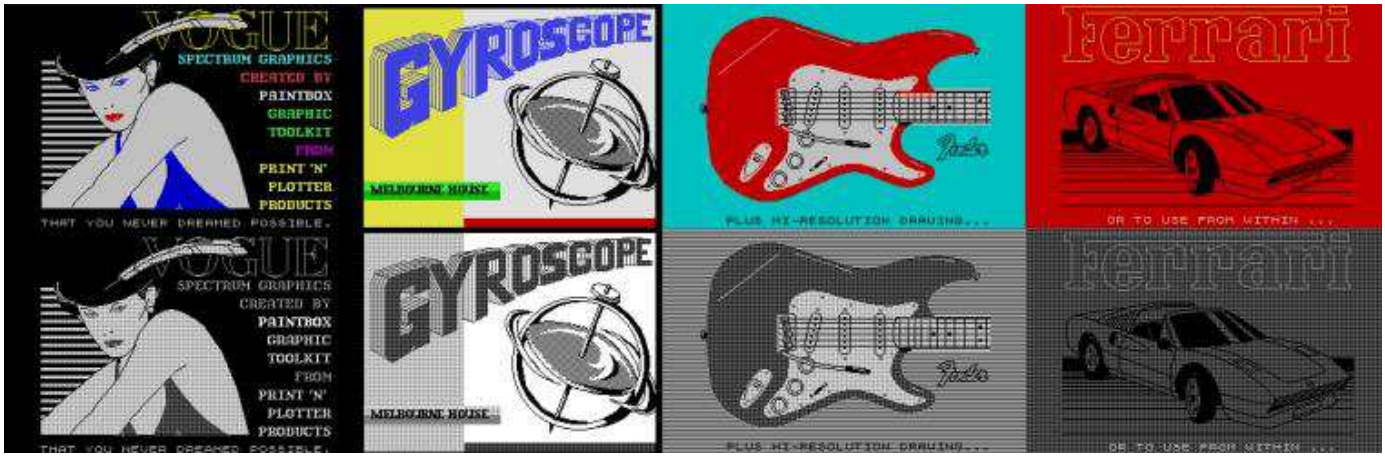
The shell is activated by clicking the left mouse button. It is recommended to work over it, its more conveniant.

In the documentation CHRISTIAN GRANDLER goes into detail how the Z80, the video output, the interrupts, the ZXS keyboard, the sound and some other modules are realized. This is very interesting to read; that you can read this in a documentation is extremely rare. But you should know some English, because the documentation is written completely in English.

The emulator is fun, even if it runs relatively slow on the ST. And it is not without a certain irony to run a RetroComputer emulation in a RetroComputer emulation. And by the way: There is also a ZX81 emulation for the ZX SPECTRUM. That would be an emulation running in an emulation running in an emulation....

If anyone is interested in the emulator - email me. You can find my email address in the imprint.

jg



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